

Foundations Module

Yin Yoga
Teacher Training



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2nd Edition

Foundations Module (50hr)

Yin Yoga Teacher Training

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Section 1: How To Practice and Teach Yin Yoga

What is Yin Yoga? And What Yin Yoga is Not.

Yin Yoga is an approach to postural yoga that is meant to be a complementary style of practice to more active styles of postural yoga. The intentions of Yin Yoga are to stimulate, strengthen and revive tissues of the body that are not emphasized to the same degree as in active styles of yoga, hence its complementary nature.

Here I will give detailed descriptions about the four main principles of how to practice Yin Yoga. But, in essence, this approach to practice could be summarized by this statement: In Yin Yoga, you bring your body into a posture where you feel modest levels of sensation, you allow your muscles to relax within that experience, and you try to remain relatively still for between three and five minutes. All those points need to be clarified and qualified, but that, in a nutshell is the essence of the Yin Yoga practice.

Introduction to Yin/Yang Theory and Practice

To better understand the intentions of Yin Yoga, it's helpful to have a basic understanding of Yin and Yang theory. The terms Yin and Yang come from the ancient philosophy of Taoism. The adherents of Taoism, known as Taoists, were keen observers of nature, and in their observing patterns of nature, they described the dynamics they observed in terms of oppositional and complementary relationships. In other words, every thing — both within itself and in relationship to other things — possesses both oppositional and complementary qualities.

For example, consider a tree. A tree possesses both upwardly and outwardly expanding branches as well as downwardly stabilizing roots. In the case of a tree, the branches would be considered "yang" in nature — that is upwardly and outwardly expanding — and the roots would be considered "yin" in nature, by their downward and stabilizing quality. But one does not exist without the other. Furthermore, we could then compare the tree to a cloud. In this relationship, because the tree is below a cloud and more material in nature, it might be classified as "yin" relative to the more dynamic, lighter, and spacious nature of the cloud, which would be considered more "yang." And yet, if we change the relationship and compare the tree to the earth, one could make the case that the tree is more "yang" in relationship to the "yin-like" nature of the earth. In other words, and this is really important to remember: nothing in this model of relationship is fixed or absolute.

Yin and yang are descriptive terms, adjectives, to describe aspects of a relationship. Nothing in the world is inherently yin or yang. Something receives the designation of being relatively more "yin" or more "yang" only when it is being evaluated against something else. Moreover, with any sort of yin/yang analysis, there is also a specific characteristic or trait that is being evaluated, such as temperature, or location, or capacity to move. So in any Yin and Yang dynamic, it's important to bear in mind two things: 1) What two things are being compared? And 2) what trait or quality is being evaluated in that relationship.

The Chinese character for "yin" literally describes the shady side of a hill. And the Chinese character for "yang" refers to the sunny side of a hill. Based on this description, there has been a general consensus, over more than 2 millennia, within Taoist and Chinese medical theory, that "yin" phenomena tend to refer to things that are relatively cooler, moister, darker, downward, still, slow, yielding. Similarly, the general consensus for "yang" phenomena refers to things that are relatively hotter, dryer, brighter, more upward, active, quick, and forceful. Please remember, these are not fixed, absolute traits. They are relative terms used to describe relationships.

Yin Yoga vs. Yang Yoga

For the purpose of understanding and analyzing yoga styles, Yin/Yang theory offers one lens for assisting that evaluation. Styles of yoga practice that tend to be slower, that emphasize stillness and receptivity – these styles would be classified as more "yin" in nature; whereas styles that are more active, dynamic, moving – these styles would be classified as more "yang" in nature. Notice that I used the word "styles." Many styles of yoga could be classified as "yin" in relationship to more "yang" styles. Restorative yoga, Yoga Nidra, Raja Yoga, and Yin Yoga are all relatively more "yin" in nature compared to Iyengar Yoga, Ashtanga Yoga, Bikram Yoga, and Vinyasa Yoga, which are more dynamic and "yang" in nature. But again, these terms yin and yang are descriptive and relative, not absolute.

Now, as a style of "yin" yoga, Yin Yoga (the specific style) is intended to balance and harmonize the body and mind in tandem with other more "yang" styles of practice. Generally speaking, "yang" styles of yoga emphasize rhythmic and repetitive contraction of muscles, moving the body through dynamic flows which stimulate, stretch and strengthen the muscles, or "yang" tissue of the body. Yin Yoga, as a style, emphasizes passive, static postures, held with the muscles in a relaxed state; this is done so that dense connective tissues around the muscles and joints can be stimulated, somewhat stretched, and strengthened. Together, Yin and Yang yoga offer complementary, mutually beneficial strategies for maintaining optimal health of our bodies and minds.

But, in recent decades, modern yogis have largely neglected training and developing the Yin aspect of their yoga practice. As such, many modern yogis are missing out on the "other half" of practice, namely the Yin dimension of yoga.

Benefits of Yin Yoga - A General Overview

On a physical level, Yin Yoga targets layers of tissues in the body largely neglected in yang yoga. Specifically, dense connective tissues around our muscles and in and around our joints are gently and safely stimulated by an intelligent practice of Yin Yoga. This Yin stimulation of dense connective tissue promotes this tissue's strength, vitality, hydration and resilience.

But on the energetic level, many researchers in the field of energy medicine theorize that the dense connective tissues are the biological substratum for the network of energetic communication in the body. I'll explore this theme in much greater detail in the series on The Energy Body. In general, however, the practice of Yin Yoga is one way of promoting greater energetic flow and enhanced energetic circulation. In Yin Yoga, deep energetic stagnations are unblocked, particularly in the joints, and the ensuing response is one of calm and stillness as one's energy circulates with unimpeded ease.

And mentally, the Yin Yoga practice offers the opportunity to cultivate "yin" capacities of mind. In yang styles of yoga and meditation, we're often told to direct our attention to sensations in our body, or focus on our breath, or to not let ourselves be swept away by thoughts. As instructions, these are all well and good, but they represent "yang" capacities of control, management, and attempts to optimize experience. On the other hand, one could intentionally seek to cultivate "yin" capacities of mind. These capacities would include: receptivity, quiescence, and allowance. And the approach to developing these qualities of mind is quite different from more classical "yang" forms of meditation. I'll dive into this more in the lessons on a Yin approach to Meditation.

Please remember, however, that there is no hierarchy between Yin and Yang. The primary intention of the intelligent yogi is to be mindful of their body and mental dynamics and to promote harmony and balance amongst those dynamics. For one practitioner, a more "yang" emphasis will support greater balance. For another, a more "yin" approach will promote greater balance. And, as we'll see, in different seasons, or with different life circumstances, or at various stages of life, a judicious application of different styles will be required to promote harmony and balance.

Principle 1: Coming to a Posture, Playing the Edge

The first thing that we do in Yin Yoga is come to an "edge" in a posture where we start to feel mild, moderate amounts of stress in the area of the body that we are intending to target. The general Yin Yoga community refers to this area of the body as the "target area." And I'll continue with that phrase.

The Target Area/Areas

The "target area" is the region of the body that we are intending to positively stress and influence by the practice and execution of our posture. Based on the understanding of functional alignment - that is, an approach to alignment that focuses on the functional effects of a posture as opposed to the aesthetic "look" of a posture — one of the interesting things about building our postures around the intention to stimulate a specific target area is that several people / students might be targeting the same area but the means by which they go about doing that might look quite different. In other words, a handful of yogis could be stimulating the same target area, but from the outside, it might look like they are all in different versions of the posture. This is an inversion of the more conventional approach to postures where everyone is encouraged to look a particular way. In Yin Yoga, and increasingly in other styles too, there is much more emphasis placed on the practitioner understanding how their body is uniquely influenced by the pose and then from that making wiser choices about how to "align" themselves within the pose.

So the first principle of coming into a posture in Yin Yoga is to align the body around the intention of where you as the practitioner are intending to stress the body, *i.e.* the target area.

Now, where this might get confusing is when we consider that most postures will have multiple potential target areas, *i.e.* in each pose there may be multiple areas of the body that might be positively stimulated and stressed. And depending on the phase of the posture, some target areas will be emphasized more than others. Let me clarify what I mean by phase for a second. By "phase," I'm referring to what stage of the posture you're in. Each posture might have multiple phases or stages of playing one's edge. For

example, when you first come into a seated forward fold, say, your range of motion might only be 20 degrees of flexion, but as your body starts to unwind over time during the 4-5 minute hold, you might progress to 30 or 40 degrees of flexion. So each pose might have multiple phases, and different target areas might be highlighted more or less at each phase. Again, in the example of the forward fold, in the first phase you might come forward and feel more sensation in the lower back. But as that tension releases, you might go to a deeper phase of the pose, and feel less sensation in the lower back but increased sensation in your hamstrings and backs of your legs.

Additionally, depending on individual variations in body type, some people will have access to only certain target areas, and others not so much access at all, while still others might be feeling sensation in all potential targets. This always depends on the unique skeletal dynamics of each student.

Often, I hear students express confusion when they aren't able to feel sensation in one of the potential target areas. They assume that if they aren't feeling it in a region that I listed as a potential target area that they are doing something wrong. So let me be as clear as possible: each posture will have multiple potential target areas. In practice, you might access significant sensation in one or multiple target areas in any given pose. But just because a posture has multiple potential target areas doesn't mean that you MUST feel all those potential areas in your posture. You might just feel one target area at a time. Or you might feel a few of the potential target areas at a time. Or, if you've been working at a posture for a while, you might not experience significant sensation in any of the target areas. In this latter case, your practice in that particular posture will have shifted into more of a maintenance practice where you're maintaining your capacity to move into and explore this particular range of motion; you're no longer practicing to attain that capacity.

Once you have orchestrated your body in a posture to emphasize mild and moderate stress in a particular targeted area, then it is important to identify what kinds of sensations are appropriate to be with and what kinds of sensations are inappropriate.

Sensations: Appropriate and Inappropriate

One of the very challenging things about practicing and teaching Yin Yoga is developing an appreciation for the practice-specific sensations that are encouraged in Yin Yoga (see Bitter Practice/Sweet Result). In general, with Yin Yoga, we are intending to feel non-neutral sensations that might be characterized by the following terms: a mild or moderate achiness, or a dull, slightly bitter sensation, or a broad, diffuse and slightly unpleasant sensation. These qualities of sensation are often new to students when they come to Yin Yoga. They are not used to being told to encourage these sensations, let alone "soak" into these sensations for several minutes. So as a Yin Yoga instructor it is of vital importance to educate students about these appropriate sensations.

For some students, descriptive terms —like achiness, dull bitterness, diffuse pressure — are most helpful. Other students, however, might benefit from evaluating their experience against a sensation scale, where 0 is no sensation, and 10 is unbearable pain. In this kind of spectrum of sensation, I suggest that appropriate sensation lie somewhere between a 2-5, if possible. This is the general range that we seek out in Yin Yoga, somewhere between a 2 and 5 on a sensation scale. Granted, each person will experience sensation in accordance to their own unique subjective threshold, so the use of this sensation scale is meant to be held lightly.

Breath. Another barometer for appropriate sensation is one's experience of the breath. If a student requires a full, deep, directed breath to sustain their ability to stay in the pose, I suggest that this might indicate that the edge they are at is too intense. In other words, I recommend that the student should be able to breathe in a normal and relaxed way. That should be an option. Whether they choose to breathe normally is another issue, and something the student may or may not choose to do. But they should be able to do so. If breathing aggressively, as though you were breathing "through the intense" sensation is the only option, then I feel this indicates that you're at an edge that is too aggressive for your tissue's capacity to tolerate the stress of the pose and that you should do the wise thing and back out of the posture, settling into a milder edge.

Yin Yoga vs. Restorative Yoga

Additionally, seeking out this Yin-specific type of sensation is really what distinguishes Yin Yoga from Restorative Yoga. Take this as a very general guideline: in Yin Yoga we are intending to place appropriate levels of stress on the tissues. In Restorative Yoga, however, the intention is usually to avoid significant stress and sensation; rather, in Restorative Yoga you would open up and support the body with props as a way to calm, relax and nourish the system. Confusion crops up when two people might be in the same exact pose, in the same exact range of motion and configuration. From an outsider's perspective these two practitioners would look like they were in the same exact posture in terms of prop use and achieved range of motion. But internally their experience might be entirely different. One yogini might feel Yin-characteristic sensations of dull achiness in one or many of the potential targeted areas. The other yogini might feel only the slightest hint of extremely mild sensation, in other words, not very much sensation. The first yogini would be practicing Yin Yoga – that is, experiencing mild stress while in a pose. The second yogini would be practicing Restorative Yoga, that is no stress during a pose. But they look, from the outside, to be identical. Once again, what the yogini looks like in a pose is the least reliable factor in evaluating what they are experiencing in a pose. I can't emphasize this enough that teachers must engage in a dialogue with their students in order to understand what their students are experiencing — this conversation will best help facilitate the teacher and student to make the best decisions for that student in their practice.

Pain and Numbness

So once people have an idea about what sensations are appropriate in Yin Yoga, namely mild and moderate stresses that could be slightly achy and bitter, students also need to be made aware of what sensations are not OK. These inappropriate sensations include: pain, numbness, and tingling.

Pain. Pain in any shape or form is to be avoided, ALWAYS. There is a difference between mild and appropriate stress and the kinds of intense painful stresses that lead to injury. Let pain be the signal that the experience you're having is moving towards injury and to back out immediately. Included in the general category of pain might be sensations such as: intense burning, stabbing, electrical sensation, or throbbing. Or on the mental side of experience: things like extreme agitation, homicidal or suicidal rumination (joke), overwhelming anxiety, etc. When pain is present, the practitioner has two sensible options: to back off a bit to a more mild edge, if possible, or to exit the pose entirely and wait until the next posture. Staying at a threshold that produces pain will result in injury and I make it clear that the

practitioner must take responsibility for their experience. If you override the signal of pain, and bear the pose too long with an attitude of stoic fortitude, you risk injury. Yogis and yoginis must take full responsibility for their experience.

Numbness and tingling. Generally, numbness and sometimes tingling indicate that the orientation and alignment of the body are causing a nerve entrapment which is creating the experience of numbness. Less commonly, the numbness may be caused by vascular constriction. Either way, though, numbness is also to be avoided. Often small readjustments/subtle reorientations of the limbs — particularly at the pelvis and shoulder girdle — can mitigate numbness. But if modifications of alignment fail to mitigate the numbness, once again, the student should exit the pose, and either select a different pose or wait out the remaining time in rest position, such as child's pose or savasana.

Note for teachers: Why I de-emphasize being still in postures.

There is a reason why I don't emphasize being still as the most important facet of practicing Yin Yoga. I feel that if a teacher overemphasizes stillness in the way that they articulate the practice to students, it becomes all too easy for students to internalize an ideal of stillness into the way they practice. The result of this internalized ideal of stillness is that the students may feel like they are not practicing correctly if they move a bit while they are in the pose for the prescribed period of time. And this kind of rule against moving can easily lead to a situation where the student is staying in a pose past their appropriate edge, past their tolerance for stress, setting the stage for injury.

So, because of this, in my teaching, I recommend and encourage an emphasis on "playing one's edge." And there are two main components to playing one's edge:

1. In the event that the sensations one is experiencing in a posture simmer above the tolerable level of moderate to mild achiness, it becomes imperative that the student back out to a gentler edge. Here the student would shift and move to a more appropriate range of motion or alignment where the sensations shift into a range of moderate to mild. This is an example of "making progress by retreating." In the case where a student is not able to find an edge where the sensations are moderate and mild, it's important that the student either comes out of the pose entirely and seeks help from the teacher to find a different posture, or that they rest in a neutral posture for the remainder of the time.
2. Going deeper. So half of playing one's edge is knowing when to back off or come out of a posture entirely. The other half is knowing when to safely and appropriately go deeper into a posture. In this case, if you settle into a posture for a minute or two and find that the intensity of sensation diminishes dramatically, it is then helpful to consider going more "deeply" into the posture. This deepening of the posture, *i.e.* increasing the range of motion of the posture, is a natural response to the way the body begins to adapt to the pose. As the muscles and deeper connective tissues start to relax and give way to the stresses being placed upon them, one needs to adjust in order to now maintain the mild and modest stress being placed upon them. So, in this case, going further in the posture is part of the natural unfolding of the experience and not driven by egotistical grasping or striving.

A caveat on this last point: sometimes the strong sensations of a posture will fade and it simply won't be possible to find a deeper edge that generates more sensation. In this case, the student will likely have

maxed out on their normal, safe and healthy ranges of motion, and the intention of their practice should now shift to that of a maintenance intention.

Principle 2: Relaxing the Muscles (in the Targeted Area)

The second aspect of executing a Yin Yoga posture is to relax the muscles in the area that you are targeting. Confusion tends to arise when students hear this instruction to "relax the muscles." There is a tendency to take this as a global mandate that in Yin Yoga ALL muscles MUST relax, but this is going too far.

Similar to the first principle of Yin Yoga where the body is brought into a position with the intention to target a specific area with an appropriate degree of stress, in this second principle, one endeavors to relax the muscles primarily in the targeted area itself. And it's this action of relaxing the muscles in the targeted area that shifts the emphasis of the posture's stress into the denser connective tissues around the muscle and the joint.

You can demonstrate this to yourself with what in the Yin Yoga world is called the "finger trick." If you firmly point your finger, that is strongly extend your index finger and maintain muscular contraction while you start to try and pull the extended finger away from your hand, you will notice that not very much happens at the joint where the finger meets the hand. However, if you now relax the muscles in the index finger and gently begin to pull the relaxed finger away from the hand, you will notice space is created at the joint where the finger meets the hand. That "created space" indicates that the joint tissues are now being stressed, gently, by virtue of the muscles being relaxed.

In relaxing the muscles, the emphasis of the stress of the posture shifts to the denser connective tissues, especially around the joint. Upon hearing this point, invariably a student will comment: But I still feel sensation in my muscle, for example in the quads, or hamstrings. At which point, I remind them that it's not a black and white affair, it's a degree of emphasis. With the muscles relaxed, the emphasis of the stress shifts more into the joint tissue, but it's entirely likely that some students will still feel significant sensations in and around their muscles. This is still desirable and not a problem at all.

In the interview, *Creating Change*, fascial expert and bodyworker, Tom Myers, speaks to this vital need to relax the muscles in order to produce lasting changes in the connective tissue/fascia: He begins by talking about patterns of tension that are held in the fascia and connective tissue. He doesn't mention Yin Yoga here by name, but if you listen closely, you'll hear something that sounds awfully similar to Yin Yoga.

"But by the time your fascia gets stuck in that pattern, the problem is how are you going to get out of it? General exercise won't get you out of these things. They will not change the pattern of the fascia. You need long, slow stretches, such as during yoga.

One of the wonderful things about yoga is that because of the sustained stretch held in many yoga poses, you actually do change the connective tissue. So you change the pattern of that fascia and thus you can get down to the chronic tension patterns lodged in the tissues. This can lead to a wonderful emotional unfolding over the long term.

But what the people who developed yoga recognized was that in order to change the person -- not just to change the

chemistry or to change the amount of strength that you have or your readiness to dive off a diving board -- but to really change the person that you are, to change the issues in the tissues, then you really have to make a deep change in the pattern of your body.

Now that pattern is in the nervous system, that pattern is in the muscular system, that pattern is in the chemistry, that pattern is in the fascia. But once the pattern is lodged in the fascia, you have to address it at the level of fascia for it to release.

So there are different ways in which you can go about doing this. But generally, the sustained stretches of yoga where you hold a posture for several minutes (as you do in many yoga styles) give the muscles a chance to calm down. The muscles have to relax first, and then the fascia starts to stretch and release. And that can facilitate the kind of re-patterning that leads to lasting release of chronic holdings and, in many cases, a profound change of mind and body."

Inadvertent Clenching

Another thing that is commonly mentioned with regard to this principle of relaxing the muscles is that students will report that even though they initially relax the muscles in the targeted area, after a minute or so they find that those same muscles have become activated again, and are either tight, tense or clenched. This, too, is normal and common. To me, it suggests a guarding and protective mechanism kicking into gear, and that is happening unconsciously. While soaking in the posture, the body instinctively guards against the dull, achy sensations that are generated by the Yin stimulation. Muscular contraction has the effect of "protecting" the joint, thereby minimizing that unpleasant sensation.

In many ways, noticing that your body has unconsciously slipped into a protective hold is similar to noticing that your mind has wandered from your breath in meditation. It simply becomes an opportunity to reset and begin again. So, in the case of gripping muscles, I suggest just noticing how that feels and then slowly beginning to encourage a gentle relaxation of those tightened muscles. Now, remember, upon relaxing the muscles again, you may discover that the sensations you are experiencing are quite intense and beyond the threshold of appropriate intensity. In that case, heed the feedback of the sensation and the desire to protect, and back off from your current edge, and settle into a milder edge.

Strategically engaging muscles (What about engaging some muscles?)

Finally, even though we relax the muscles in the targeted area, it's fine and sometimes helpful to strategically engage other muscles in the body in service of enhancing the quality of stress being placed upon the targeted tissues. In his book *Yin Yoga, Principles and Practice*, Paul Grilley suggests how in a forward bend, you might strategically use the hands to hold the feet, gently engage the arms, and mildly enhance the tug on the tissues along the targeted areas of the spine and backs of legs. Caution must be used to not tug aggressively or with an attainment mindset, but so long as the result of the musculature engagement is a mild enhancement of Yin-appropriate stress, it's fine and good. Another example of strategic musculature engagement might be in the postures of Sphinx or Seal. If one were to categorically relax all muscles, the person's head would hang down towards the floor. But, by strategically lifting the head — and possibly arching the head back — one might enhance the safe stress along the lower back that is being generated by gentle compression in the posture.

Principle 3: Staying Relatively Still for Time

The third principle of Yin Yoga is to stay still for relatively longer periods of time than you would in an active style of yoga practice, such as Ashtanga or Vinyasa Yoga. The question of how long one should hold the posture often surfaces. By now, you may be anticipating my answer. How long one should stay in a posture depends on a few factors: namely the tolerance level and strength of the tissue being stressed, and the broader intention behind that stress.

With the understanding that we are attempting to positively stress (*i.e.* exercise) dense connective tissue — both around and within the muscle, and around the joints — one needs to subject these tissues to longer sustained stresses in order to activate certain kinds of positive changes in these tissues. As I discuss in the lesson, *Theory of Exercise*, all tissues need stress in order to maintain their optimal health and functionality. Dense Connective Tissues are no different, and this Yin stimulation of gentle, but prolonged, stress is an optimal formula for strengthening and remodeling these particular tissues.

Initially, when taking up the practice of Yin Yoga, it is possible that the strength of these tissues might not be very strong. And because of that weakness, a student might find that — after a minute or two in a posture — their experience is one of intense and inappropriate sensation. For these cases, it is of utmost importance that they come out of the pose when the sensations simmer above the appropriate edge.

The intention is to steep the targeted area with mild stress for several minutes; however, if the tissue is unable to tolerate stress for several minutes, the student needs to be educated around how and when to come out of the posture, rather than staying until the end of the time. In other words, the appropriate amount of time in a posture will vary and depend on the student's capacity, specifically the student's tissue strength capacity. And as I have said previously, if you're teaching Yin Yoga, the students in your class need to be positively reinforced for taking good responsibility for themselves by coming out of a posture as and when the sensations simmer into the inappropriate range of the spectrum.

Advancement in Yin Yoga

With consistent, regular practice, the tissue's tolerance level will increase. The physiological response of the body is to reinforce areas that are being stressed (exercised). When our Dense Connective Tissues are reinforced, they become more capable of tolerating stresses for longer periods of time.

This is what I see as the progress of Yin Yoga. And I say this with a touch of irony. I think, in some ways, the progress mindset is antithetical to the practice of Yin Yoga, in the sense that the broader intention in a Yin Yoga practice is to emphasize relaxed receptivity to what is, free of striving and the desire for constant attainments. BUT, for the Type A need-confirmation-of-progress folks out there, the ability to stay for longer periods of time in a pose before reaching the endpoint of one's tolerance threshold is one way of evaluating one's development. As the Dense Connective Tissues become stronger, they become better able to tolerate stress. This is a good thing.

So, after a few weeks of introducing one's body to Yin Yoga, they might find that they can stay in poses for several minutes, perhaps five or six minutes (or even longer). And what's interesting about this is that

one's Range of Motion may not change significantly over this time frame (either in the held posture or over the course of several weeks). The Range of Motion could dramatically change, but it might not. It depends ;) But the ability to remain still in a posture will likely increase. This points to a pretty clear difference between Yin Yoga and styles of Yang Yoga, where in Yang Yoga, progress is tantamount to performing postures of greater, more significant, ranges of motion. It can be a "more-is-better" mentality, where it's about more and more range of motion. Thankfully, this attitude is coming into question more and more, and intelligent Yang Yoga teachers seem to be backing off from this implicit assumption that advancement equals greater range of motion.

But the point remains: For Yin Yoga, the ability to stay for longer periods of time, simmering at a mild level of sensation, is a sign of "progress." Please track it in your own experience and observe it for yourself.

I know, personally, that if I go more than a week without practicing Yin backbends, my back tissue loses the capacity to tolerate a five minute hold. BUT, with regular, near-daily, practice, a five minute hold stays within the appropriate levels of sensation and stress. Again, we are reminded of the Use It or Lose It principle or Theory of Exercise.

Points for teachers

If teaching Yin Yoga, some language for this is helpful. In a public class of say, ninety minutes, you, as the teacher might decide to arbitrarily hold postures for four or five minutes. This tends to be the normative amount of time held for Yin Yoga postures. But this won't be appropriate for everyone in your class. Some students will need to exit postures long before the five minute mark. And some might be able to stay within the posture well past the five minute mark.

If this is not specifically addressed by you, the teacher, a student's naive assumption might be that it's better to stay for the full amount of time — even if uncomfortable — than to back out early. So, here's how I will often cue this important piece. I will explicitly tell students in my classes this: "If I see you back out of or exit a pose completely before the 4 or 5 minutes are up, I don't think to myself, "Geez, what a pathetic, weak-minded yoga lightweight." I think, "Excellent, this student is listening to the feedback from their body and practicing wisely." In other words do not hesitate to come out of a posture sooner than the called time if you deem it necessary. The authority is in the practitioner's or the student's seat. Another common phrase that is designed to grab the student's attention is this: "If you injure yourself in my class, it's your fault. I'm educating you on sensations that are ok and not ok. You are free to disregard this education, but you put yourself at peril by doing so. Practice conservatively and live to practice another day."

The main reason we stay for longer periods of time in Yin Yoga practice is that Connective Tissues don't change or adapt very much with short, brief stresses. As I'll explore this more in the lesson on Viscoelasticity, viscous materials resist flow. Connective Tissue is often described as having viscoelastic properties, and as such, it requires gentle prolonged stresses to influence its quality, both in terms of releasing any contracture or shortening, and in terms of strengthening and reinforcing its collagenous make-up.

Principle 4: Coming Out of a Yin Posture

When it is time to come out of a Yin Posture, you may feel a pronounced disinclination to move quickly. Remember: the tissues in the area that you have targeted will be temporarily weakened as a result of the stresses placed on them during the hold. As such, these targeted areas tend to feel delicate, fragile, vulnerable, and tender. Another way of humorously describing this is to suggest to the students that they might feel as though they've aged rapidly, sometimes as much as a decade or two in just a five minute hold!!

It is extremely important for teachers to speak to these sensations and to tell students to anticipate feeling them. Failure, on the part of the teacher, to do this, will trigger inner alarm bells in the heads of their students, simply because upon first encounter, these Yin-specific sensations feel rather incorrect or wrong, if not dangerous. The uneducated student will be tempted to roll up their mat. But, once again, by normalizing these experiences, the teacher can help the student to better understand what is situationally appropriate, what isn't appropriate, and how to make wiser decisions about how that student might go about practicing.

So, because of these kinds of sensations, it's a good idea to encourage students to also come out of the pose slowly. Or, as I like to cue, "Come out gingerly." Cautiously, and carefully. Nothing too quick. And spend at least thirty seconds, if not a few minutes in a neutral pose — such as a supine or prone savasana, or child's pose — allowing the body and mind to adapt to the previous posture's experience. Paul Grilley, the godfather of Yin Yoga, calls this neutral pose after a Yin Posture the "rebound pose." This name refers to the rebound effects — physical, energetic and mental — that unfold upon coming out of a pose. Personally I prefer the term: Resonance Pose. Rebounds just get me thinking about basketball. But by whatever name you wish to call this neutral pose, let's look at what's going on within that time.

Resonance Pose

By resting for a minute or two in a neutral pose after one of the more sensation-rich Yin Postures, you give yourself or your students the opportunity to observe the subsequent experiences that unfold in the body and mind. In other words, there is intentional space to observe the resonant effects of the Yin Posture. Generally speaking — but certainly not all the time — there's a fairly common arc of experience that looks like this:

1. Upon coming out of the pose there is an initial experience of delicacy and fragility in the area, with a disinclination to move quickly.
2. While resting for a minute or so, these bitter sensations might even swell or bloom more intensely before giving way to softer, subtler, more spacious sweet sensations. Some experience these subtler sensations as rippling tingles, or cool flowing sensations, or waves of warmth. For others it's more the quality of space in the body that is not obstructed by gross, dull sensation anymore. In the Module on TCM (Yin Yoga Teacher Training: Traditional Chinese Medicine Module) I consider the sensations during and after a posture from an energetic perspective. But it's important to encourage students and oneself to simply come to know what the body's internal experience is like first hand.
3. Generally, after a minute or two, any bitterness from the previous Yin Posture will have subsided

and its now time to move into another posture.

Points for Teachers

In your teaching, whenever you introduce a relatively new topic or concept to your audience, it's a good idea to link that new concept to a previously accepted concept. This connection will help your audience understand your message and increase comprehension/ buy in.

In the above example, many people are unfamiliar with their dense connective tissues feeling weakened and vulnerable as a response to exercise (Yin Yoga). But, they are likely familiar with the experience of having worked out very hard — either at the gym or in a Yang Yoga class — and then, 24 to 48 hours later experienced what is known as DOMS (Delayed Onset Muscle Soreness). (For the moment, never mind that current research now thinks that the soreness is actually in the fascia that invests around the muscles. For here, we'll stick with the reference as Muscle Soreness). So with Yang Exercise, the tissue feels achy and sore in a delayed manner, somewhere between 24 to 48 hours after the exercise.

Conversely, with Yin Exercise, *i.e.* Yin Yoga, the tissues that are stressed feel instantaneous soreness. My acronym for this is ITS (Instantaneous Tissue Soreness). And there's a kind of neat symmetry here. With fast, Yang-like stresses, the body has a delayed response and becomes sore several hours later. With slow, Yin-like stresses, the body has an immediate response and becomes sore instantaneously, but it also fades relatively fast.

But, the key thing with Yin Yoga, is that the sensation has a kind of sudden onset and a very rapid dissolution. In other words, the bitter sensations generally fade after a minute or two, and give way to very pleasant qualities of being. A kind of sweet sensation.

Tissue Specific Exercise

Connected to linking a new concept to an old concept, I like to suggest that Yin Yoga can be thought of as a "tissue-specific" exercise for our Dense Connective Tissues, especially the tissues around our joints. In Yin Yoga, these tissues are safely and appropriately stressed in order to elicit the body's physiological response of strengthening and reinforcing these tissues (more when we look at Fibroblasts).

Yang Yoga and weight training are great forms of tissue-specific exercise, targeting our muscles.

Yin Yoga is a form of tissue-specific exercise, targeting the Dense Connective Tissues around and within our muscles and around our joints.

Cardiovascular exercise is a form of tissue-specific exercise, targeting our heart.

The Two Main Props of Yin Yoga

From the outside, Yin Yoga can look like a prop-heavy class. Lots of blocks, blankets and bolsters can crowd one's yoga mat for a session of Yin Yoga. However, I try to remind people in practice a few things here:

1. You want to remember to use props strategically, not universally. A prop should only be used when there's a specific intention for its use. In other words, if you're teaching and tell everyone to prop in their pose in the same exact way, that is NOT Yin Yoga. Everyone will prop differently.
2. My other favorite thing to remind students of is that the two main props of Yin Yoga are **Gravity** and **Time**. When coming into a Yin Yoga posture, we establish gentle conditions of appropriate stress, and once we're at our edge, we let gravity and time do the work. In other words we let the conditions of the pose gently work upon us, rather than us working on or within the conditions of the pose.

How to Breathe in Yin Yoga

In Yin Yoga, there is no prescribed manner in which to breathe. But there are two basic ways to think about the breath.

1. **Yang Breathwork:** If you were inclined, you could breathe in a Yang manner, whereby you would influence the breath. You could deepen and lengthen the breath. Some people like to count for 5 on the in-breath, hold for 5 after the in-breath, exhale for a count of 5, and then hold for a count of 5. This is called 'box' breathing. Or perhaps you simplify it and remove the breath retentions. Others like to add a soft 'ujayi' quality to their breath. In the Mindfulness Module, we'll practice playing with the qualities and perceptions of the breath as a means to calming the mind and building concentration.
2. **Yin Breathwork:** If you want to emphasize a Yin relationship to the breath, you would practice breathing in a less controlled, more involuntary manner. Rather than manipulating the breath in some specific way, you'd let the breath take its natural course, noticing how your body breathed differently in different postures. The cue I like to give for this approach is: "Let the body order whatever breath it would like. Your only job is to deliver the body the breath that it ordered."

Yin Yoga: The Universal Donor

Complementary Strategy

In many people's mind, when they think of exercise, they hold a "yang" bias about what exercise means. They think that exercise must involve dynamic activity, whether it be weight lifting, running, or flow yoga. But this bias in favor of "yang" forms of exercise often influences their views and feelings about equally essential "yin" forms of exercise.

Here's one way that bias shows up in yoga.

Because so many people in modern culture tend to use their yoga practice as their sole form of exercise, a

frequent concern that arises for them around Yin Yoga is that they think they couldn't do only Yin Yoga and keep fit. All too frequently, someone says to me: "I love how Yin Yoga makes me feel... BUT, I couldn't just do Yin Yoga." Based on their expression as they say this, I can only assume they think they've caught me in some kind of "gotcha" moment, where they're exposing a blind spot in my understanding of a comprehensively holistic practice. And much to their surprise, I respond, "Of course, you wouldn't ONLY practice Yin Yoga. I would never suggest that." I might continue: Yin Yoga is not a stand-alone, complete form of yoga or exercise. That's not its intention. The broad intention behind Yin Yoga is to offer complementary and balancing exercise for the body, addressing both body and mind from a more Yin angle. The intention is to stimulate tissues that "yang" yoga neglects, to harmonize the body and mind, to balance these dynamics, all in a way that an exclusive emphasis of Yang Yoga might not.

So in some sense, as intelligent yoga practitioners, we need to become more nuanced in our view about exercise. There are "yang" ways to exercise the body and mind, and there are "yin" ways to exercise body and mind. Both styles offer complementary strategies for exercising tissues, energies and capacities of mind.

A Universal Donor

With the risk of sounding like a yoga exceptionalist, I think it's a fair observation to say that many popular styles of physical yoga today emphasize "yang" aspects of body and mind. They might go about their emphasis in different ways, but in general, many styles of yoga emphasize movement and/or muscular engagement, and they emphasize the mental capacity of influence and control (all Yang dynamics). But Yin Yoga is really the only style that I'm aware of that explicitly emphasizes stillness and relaxation so that the dense connective tissues are stressed. Yes, other styles, like restorative yoga emphasize stillness and relaxation, too, but restorative yoga avoids stressing the body, at least in the same way that Yin Yoga encourages.

Now something that many, many "yang" yoga practitioners have discovered is that by integrating Yin Yoga into their overall yoga practice, their yang practices have benefited tremendously. They feel more fluid and less restricted in their yang practices. They also report of a heightened awareness or attentional sensitivity that they develop in their Yin practice that transposes into their yang practice: they report being more aware of what they're feeling in their Yang Yoga, and even more observant of what's going on in their minds. And overall, they find themselves feeling more balanced: which speaks to the overall goal of developing Yin and Yang qualities of being.

So, in this regard, no matter what style of Yang Yoga you might practice, I like to make the case that Yin Yoga can be thought of as the Universal Donor to any Yang style. Yin Yoga can complement and support any other style of Yang Yoga. In other words, Yin Yoga is the style of yoga that can get along with *everyone* at the party.

Simple, but profound

In concluding this section, I'd like to return to the theme of Yin Yoga's simplicity. Truly, Yin Yoga is one of the simplest practices I've ever encountered. After all, what could be simpler than coming into a posture, relaxing certain muscles and remaining still for a few minutes?

And yet, the simplicity of Yin Yoga belies its profundity. Within the simplicity of Yin Yoga, deep restrictions in the body are gently coaxed to safe and healthy stages of opening. This was most noticeable to me when I began going on long, silent meditation retreats years back. On my first few retreats, my body was literally racked with mind-numbing pain and resistance (and this was the case after many years of a dedicated Iyengar Yoga practice). But by adding Yin Yoga to my routine, after just a few months of practice, I found I could meditate for much longer, in much greater comfort, and that the nagging pain and soreness of meditation had become a thing of the past.

And as a teacher, I've had numerous students report how Yin Yoga has truly been a life saver. For one reason or another, Yin Yoga was the only practice/intervention that was able to mitigate their chronic back pain or discomfort. Again, this speaks to the ways that simple interventions can have enormous impacts on the body.

Energetically and mentally, I have also found the practice to have had a noticeably profound impact in my life. A softer, gentler side began to develop, which complemented my tendency to control and overly micro-manage myself and others. As these Yin dimensions of my being developed, I noticed a growing intuition around what kinds of things I needed to do, or exercise, or eat, in order to appropriately nourish myself on all levels. And I don't think an asymmetrically "yang-only" approach to yoga could have provided me with that intuition.

Of course, reading or hearing about Yin Yoga and its benefits is about as fulfilling as reading a menu when you're hungry. The proof is in the eating. And for Yin Yoga, the proof is in the practice.

Bitter Practice - Sweet Result

Years back, I was on a meditation retreat with the Thai Forest monk, Ajahn Amaro. Ajahn Amaro is actually British, but ordained in the lineage of Ajahn Chah from northeast Thailand, and he is now the presiding abbot of a Buddhist monastery in England called Amaravati. During that retreat, Ajahn Amaro described meditation practice as a "bitter practice with a sweet result." As soon as I heard that phrase, I knew immediately that it encapsulated the essence of practicing and teaching Yin Yoga. "Bitter practice with sweet result," speaks to what is so challenging about practicing Yin Yoga, as well as to what's challenging about teaching it. In this lesson, I want to look at this theme more closely. Generally speaking, I often get the sense that when students come to a Yin Yoga class they want to feel good throughout the class, start to finish, particularly when it's a class that seems on the surface to be "gentle" and "quiet" and "meditative". And yet, when they come to a Yin Yoga class, that is not the average person's experience. At some point during the second or third posture of the sequence, newcomers often evince a grimace of distaste and concern. Part of the problem stems from the common misperception that Yin Yoga is just another form of restorative yoga. I've tried to clear up that confusion in the lesson, *Playing The Edge*, but here I want to focus on what makes Yin Yoga so challenging, at least initially, when people embark on a journey into Yin Yoga.

Physical bitter-sweetness.

On a physical level, there's no escaping that there's a lot of bitterness during a Yin Yoga practice. In the

body, you are asked to tolerate mildly moderate achy sensations that are likely to be outside your thermostat's settings for your normal comfort zones. This doesn't mean that every minute of every pose will be defined by bitter sensations, but, especially in the beginning, the realization that a lot of the poses aren't exactly comfortable can plant more than just a few seeds of doubt in your mind. "Why on earth," you might silently ask yourself, "would I voluntarily subject myself to this type of sensation." As I discuss in the previous lesson, *Playing The Edge*, it's precisely this kind of sensation that accompanies a mild and appropriate level of stress on certain tissues that don't normally get stimulated in active forms of Yang exercise. So for students, and for anyone teaching Yin Yoga, it's really, really important to communicate that this bitter flavor of sensation is not at all a problem. I usually suggest that newcomers suspend their judgment of the practice until after the class is over. It's only after the practice that they will really feel the sweetness that has developed in their bodies. Of course there will be pockets of sweet sensations upon coming out of poses and resting in savasana, for example, but the deeper sweetness of being that I'm referring to is usually most noticeable after the practice, lingering on for a while. The body might feel lighter and freer, less restricted, unencumbered by aches and discomforts... all signs of a sweetness that emerges from the bitterness of gently stressing the denser connective tissues.

Another way of speaking to the physical bitterness of Yin Yoga is to consider it as a kind of bodywork. When you go to a skilled bodyworker and describe to them what feels uncomfortable in your body, they will then work on you in a way that doesn't necessarily feel comfortable. And you're paying them good money to do this. They will seek out and find the tissues that aren't working well and endeavor to rehabilitate those tissues with applied force and pressure. But after the session, when those tissues have been freed of their restrictions and dysfunctional holding, you often experience ease and freedom and lightness. Again, bitter practice, sweet result.

Mental-emotional bitter-sweetness.

But, as I often suggest, the real challenge of Yin Yoga isn't physical, per se, but mental. It's on the level of the mind where you will often confront the bitter experience of your reactions to being in the pose. It's in the stillness of the posture that your conditioned likes and dislikes will, at times, assail you with an undistracted and dogged persistence. You will squirm, you will re-adjust, you will wriggle, but, unless your physical experience escalates into the zone of inappropriate sensation the general encouragement is to marinate within that slightly bitter experience. Common thoughts that accompany this include, but are not limited to: "I really should have taken that vinyasa class at 6:45," (desire); "Constitutionally, I'm someone who needs to move. I don't think being this still works for me," (desire and aversion); "This teacher, and all his canned wisdom, really needs to stop talking so much and just get us out of the pose," (aversion); "Oh my God, when will the time be up... it feels like I've spent half my adult life in this pose already," (restlessness); "What's this puddle collecting under my chin on my mat? Oh dear, am I drooling? Did I fall asleep? I hope I didn't fall asleep and snore," (sleepiness and aversion); "I've really not felt these sensations in any other style of yoga. These can't be good; especially all this compressing/jamming in the lower back. Every other teacher I've ever had has said to never do this," (doubt). Of course, that's just a shortlist of the myriad reactions people have during a Yin practice. But, but, but... by intending to be gentle and tolerant to these patterns of mental reactivity that arise during the practice, you may find, as many have, that you develop a different way of responding to your inner reactivity. In other words, things that might normally trigger you and spark a fire of irritation... these very same things don't agitate you as much after a Yin Yoga practice. Some might be tempted to suggest that the reason is that you've developed a state of calm and equanimity that buffers you from the triggering dynamic.

While that's possible, and likely part of the equation, I also try to explain it slightly differently, suggesting that by tolerating your reactivity, you develop more understanding around it, and for periods of time you might have a less reactive, or even non-reactive, way of being with those same triggers.

This process was described succinctly by a student of mine years back. I was teaching at a studio near Fenway Park (the baseball field, for non-Americans) in Boston, Massachusetts. And this student came up to me after a few Yin Yoga classes and said: "It's amazing, after Yin Yoga, the drunk Red Sox fans on the subway no longer bother me." I questioned whether the fans' behavior had changed in any kind of demonstrable way, or whether it might be more accurate to conclude that after Yin Yoga, this student was experiencing a sweetness of being that was free, for a period of time, from her own reactivity to the way things were.

Special points for teachers.

In addition to the bitter practice, sweet result process that you or your students may go through while practicing Yin Yoga, I also want to highlight how this process might occur for you as a teacher while guiding students in a Yin Yoga class — how there's a bitter practice/ sweet result process to teaching Yin Yoga, itself. Basically, I like to imagine that yoga teachers are drawn to the profession of teaching by the desire to help or serve people. Generally, yoga teachers aren't there to harm students, although, of course, there may be many shadow/ dark energies that lure people to the teaching platform: power, narcissism, etc. I won't go into those now. From the assumption that people are drawn to teach to help others, one of the things that a teacher may be tempted to do in a Yin Yoga class is to try and relieve the discomfort of their students. They might offer comforting props of supports like extra blocks or bolsters in the face of student discomfort. Or a teacher might over-talk in class, trying to entertain away the restless agitation simmering through the room. In other words, teachers may find that they are uncomfortable with their students' Yin-appropriate discomfort. This is a very important point. A good Yin Yoga teacher has to learn for themselves how to become comfortable or OK with their students' discomfort. Of course, if students are in pain, or really struggling, the teacher will offer appropriate cues to adjust or change, but in general, while teaching, the teacher will be the subject of a lot of student transference (usually not the positive kind) at least during a class. And the good Yin Yoga teacher needs to learn how to tolerate that negative transference from their students. Maybe as a teacher you would name it directly; normalize it. Make it part of the practice.

And then, the sweet part of teaching might happen after class, parallel to the sweet experience of being that students feel after class. I've often heard after class: "During that Dragon variation you had us in, I was experiencing homicidal fantasies towards you... but now... now... I want to apologize for those thoughts. I feel so lovely. Thank you." And so it goes, after successfully holding space for students to work with their own physical and mental discomfort, everyone can rejoice in the sweetness of being that emerges from that deep work.

Tension and Compression

Whenever we try to move a part of our bodies in a particular manner, *i.e.* taking our arms overhead, or folding our torso towards our thighs, we inevitably come to a point of stopping. The reason our body stops moving is due to one of two causes.

We stop because of tensile resistance, or what we'll call **Tension**.

Or, we stop because of compressive resistance, what we'll call **Compression**.

Tension is caused by contracture or resistance in soft tissues. This is often what we refer to when we say that we feel 'tight.' That tightness is tension in muscle and connective tissues. The various forms of yoga that we practice, both Yin and Yang, work to release tensile resistance, or tension, from these soft tissues.

Compression, on the other hand, is not the result of restriction in the soft tissues, but is caused by bones compressively pushing into one another. Ultimately, the shape, curvature, orientation, and proportional relationship between your bones will determine where and when you come to a point of compression when trying to move your body in a particular direction. And yoga practices will not change these variables of your skeletal structure, which means that yoga won't change your points of compression. The one exception to this would be in cases where tension in the tissues tightens the joint space bringing you to compression more quickly than if the joint tissue was at a normal/healthy length.

How to Feel the Difference Between Tension and Compression

If you are experiencing tension, you will feel sensation *away* from the direction of the joint's movement, or on the opposite side of the joint for the direction it is moving towards. This is usually what we think of ourselves experiencing a good stretch. For example, if you stand with your legs straight and fold forward at the waist, you are moving in a direction called pelvic and spinal flexion. The spine is moving towards the thighs. If you felt sensation along the back of the spine, or along the backs of the legs, these sensations would indicate tensile resistance, or tension, in these tissues.

However, compression, if felt, will be experienced towards the direction of the joint's motion, or in the same direction that the joint is moving towards. In the above example of folding into a forward fold, if you stop and experience sensation of the abdomen pressing against the thighs, that's a kind of compression, or if you feel sensation (usually a kind of pinching sensation) deep in and around the front of the hip crease, this would also be compression.

The confusing element with compression is that it doesn't always have sensation. When two bones are pressing into each other, there is usually only a sense of being stuck or an inability to move any further. Or, in other words, you're stuck, but there isn't sensation that accompanies this stuckness. But, if there is some soft tissue (rich with sensory nerve endings) sandwiched between two bones — often at the front of the hip crease, where the flesh of the quadriceps is pinched between the femur and the ilium, there will be sensation in the direction of the joint's movement. This sensation is usually a kind of sharp, pinching sensation.

Compression, in itself, is not bad, per se. If compression causes pain, you would not want to tolerate it. But there are many cases where gentle compression is beneficial for tissues and bones. However, in your yoga practice, you must honor the limits of compression. If you aggressively push past compression you will invite injury to soft tissues somewhere else.

That said, even though compression is a dead end of sorts, you can work around compression by

changing the angle of the range of motion. Another way to say this is that you can work around compression by changing the alignment of the posture.

In many styles of yoga, you might hear that you should modify the pose if you can't do the 'correct' alignment, or if you have some limitation preventing you from attaining the correct form. But in Yin Yoga, and increasingly in other styles that are incorporating principles of Functional Alignment, we say that, "Modifications are not the exception; modifications are the norm." Or simply, everyone modifies every pose to their unique anatomical structure.

After learning about skeletal variation and its implications for how to do postures in a Yin Yoga training, students often ask if the same principles apply to vinyasa yoga, or to Yang Yoga. My answer: Does your skeleton magically change when you walk through the doors to a vinyasa class?

Bernie Clark's book, *Your Body, Your Yoga* illuminates this simple principle of tension and compression in all the myriad ways it manifests in different segments of the body.

Limitations to Our Range of Motion

If our Range of Motion is limited by tension, only - that is, compression has been ruled out as causing us to stop - one study looked at the tissues that were holding that tension (Jons and Wright, 1962, Journal of Applied Physiology). Their findings were this:

- 41% of tension was held in the muscle and its fascia
- 10% of tension was held in the tendon
- 2% of tension was stored in the skin
- 47% of tension was held in the dense connective tissues at the joint

For many years this study has influenced how Yin Yogis think about the practice of Yin Yoga. Namely that Yang Yoga influences and stimulates the muscles and its fascia, and Yin Yoga influences and stimulates the dense connective tissues at the joint.

Based on more recent research emerging in the world of fascia, I no longer think that this black and white dichotomy is accurate. What seems to be emerging is that it is very difficult, if not impossible, to target only one layer of the connective tissue / fascial network. What is more likely is that Yang Yoga trains and stimulates the muscle and its fascia AND the dense connective tissue at the joint, increasing properties of elastic recoil and multi-linear strength. And Yin Yoga trains and stimulates the myofascia and dense connective tissues at the joints, increasing uni-linear length and strength.

Theory of Exercise

In order to maintain the health and integrity of our bodies, we need to apply appropriate exercises to our various tissues. The Theory of Exercise asserts that all tissues need two things:

1. Adequate stress (exercise)
2. Adequate rest (recovery)

If these two conditions are met, then the body's mechanism of reinforcing itself is activated, and the exercised tissues respond by becoming healthier and stronger. The key here is that all tissues need appropriate forms of exercise. Muscles need rhythmic and repetitive stresses against resistance to maintain their strength. Bones require weight-bearing loads to maintain their density. And our dense connective tissues require gentle, prolonged loads of stress to maintain their optimal health and strength.

Teacher as Authority vs. Teacher as Collaborator/ Facilitator

When I first came to yoga and take yoga classes, the teacher would tell me what to do, and then the teacher would evaluate whether I was doing the pose correctly or not. In this model of teaching, the teacher was the authority. Because of their education and years of experience, they knew best about what I was doing in any given pose.

As I've come to know more, and subsequently become more aware of the limits of what I know, I no longer recommend or subscribe to the model of the teacher as an authority. I prefer to think of the teacher as a facilitator who is helping the student to make wiser decisions about the choices they make in their unique, individual yoga practice.

Practical implications

In this model, I want to make a few suggestions for how as teachers we can transition into a more effective facilitator in our yoga classes.

1. The student is the authority on their own experience. Even though a student may not have the precise language to describe their experience, or even the knowledge to know whether or not their experience is appropriate, a good yoga facilitator remembers that the student is the authority on their own experience.
2. A good facilitator will educate their students about what is appropriate and what is not appropriate in terms of sensations and experience. As a facilitator, you are trying to empower your students to make wiser choices based on their own experience.
3. Give students lots of permission to make choices for themselves. Encourage them to modify, encourage them to come out of a pose or back off if they feel it necessary. A good facilitator will model the options and encourage choice.
4. Encourage students to seek help if they aren't able to figure something out. And when you work one on one with a student, begin with a dialogue: "What are you feeling? Are you feeling something here, or here or there?" "What is that sensation like? Is it dull, sharp, burning, achy?"
5. Remember that what it "looks like" is an unreliable factor in terms of what the student is experiencing.

Copernican Revolution in Asana

As Thomas Kuhn noted, "Scientific revolutions are inaugurated by a growing sense... that an existing paradigm has ceased to function adequately in the exploration of an aspect of nature to which that

paradigm itself had previously led the way."

And as Upton Sinclair observed: "It's very difficult to get a man to change his mind when his salary is dependent on him not changing his mind."

With the Copernican revolution astronomy underwent a paradigm shift from viewing the earth as stationary and fixed to the heliocentric model whereby the planets orbit around the Sun. The same kind of paradigm shift is happening in the yoga world, where based on the knowledge of skeletal variation, yogis are growing out of the paradigm of Aesthetic Alignment into the paradigm of Functional Alignment.

These days, whenever I cover the theme of skeletal variation in my Foundations Module of Yin Yoga Teacher Training — and its implications for alignment in postures — I'm invariably asked by a rather concerned student, "Do these principles apply to vinyasa, as well?"

My reply is: "Does your skeleton magically change when you walk into a vinyasa class?" Unfortunately, this question does little to mollify the concern and growing vexation on the student's face. And I'm sympathetic to that.

When I first encountered Paul Grilley and his teachings on skeletal variation over fifteen years ago, that encounter was bittersweet. A lot of guilt around my inability to execute certain asanas melted with the realization that my bones were limiting my capacity to get into the pose. In other words, the issue was NOT my misperceived "tightness." It was more fundamental. And that knowledge was a sweet relief.

But, the ensuing years were not easy for the fact that I had to, more or less, unlearn every alignment cue I had assimilated into my practice and teaching. And that process of unlearning was painful. It brought up feelings of confusion, uncertainty, and insecurity. I felt betrayed and misled by my otherwise well-intentioned teachers. And I had to move forward within that confusion, still evincing some kind of commanding confidence on how to "do" postures properly.

Looking back, I'm grateful for this process of learning, re-evaluating, unlearning, and re-learning. There's a dialectic to it. And I approach my learning of the body in yoga this way. I approach my practice and teaching of meditation this way. But here's the thing: It IS NOT comfortable to operate this way.

Acknowledging that you are in error about something is painful. It stings. It triggers feelings of fraudulence. And it's truly humbling. But it's the only way science and one's knowledge can move forward.

I often use this story to illustrate the learning process. In a nutshell, this Zen story is that of a student who came to a Zen Master and asked, "Zen Master, what is the most important thing in life?" The Master replied, "Wisdom. Wisdom is the most important thing in life." To which the student further questioned, "How does one get wisdom?" To which the Zen Master answered, "Wisdom comes from good judgment."

Still confused, the student asked, "But where does good judgment come from?"

After a short pause to reflect, the Zen Master said, "Good judgment comes from... bad judgment."

How to Cue Alignment in Yin Yoga

In shifting from a paradigm of aesthetic alignment to one of functional alignment, I want to offer some recommendations for teaching functional alignment.

1. When bringing students into a pose, begin with acknowledging the intentions of the pose. What areas of the body is the pose trying to target, and also what area/areas is the pose NOT trying to target (*i.e.* where do you want to avoid sensation (usually the knees, especially with external rotation of the thighs)?
2. Then, cue a very general way of entering the pose, giving basic and preliminary suggestions for how to start.
3. Once in the basic 'idea' of the pose, invite them to explore where they are feeling sensation and what kinds of sensations they are feeling.
4. Then, offer modifications for them to try to see how the change of orientation/alignment affects their experience of the pose.
5. Lastly, give permission to try different options during the pose, as well as the option to back off or come out entirely.

In summation, you're essentially saying, "Here's the basic idea of the pose. Here's the intention/intentions of the pose. Here are some options you can play with. Now go try some of these options and settle into an experience that feels appropriate for your body."

One thing that is helpful to address is that in Yin Yoga, your alignment cues will be vague and non-specific. Students more familiar with very precise alignment cues will be tempted to think that you're either uneducated, or ignorant, or just a bad teacher for not mentioning the precise locations of where things need to be. I think it's helpful to mention this directly: "You might be tempted to think I don't know proper alignment because I'm not giving you very precise instructions for the pose. But this is intentional. In Yin Yoga we acknowledge the implications of skeletal variation. And because of skeletal variation, I can't give alignment cues that will globally work for everyone in the room. Each of you will need to modify the idea of the pose to meet your own individual skeletal structures. My cues are intentionally non-specific to grant you enough latitude to find the modification that works for you."

Once again, in Yin Yoga, modifications are not the exception, modifications are the norm. Everyone modifies every pose!

Why Your Yin Postures Won't Look Like Your Yang Postures

As teachers and practitioners of Yin Yoga, it's important to make students aware that often, people's Yin postures won't appear as deep, in terms of range of motion, as they do in a Yang Yoga context.

The reason for this is because when the body is relatively cool (as in Yin Yoga), the muscles and fascia around the muscles don't absorb the range of motion nearly as much as they do when the muscles are warmed up. So, in Yin Yoga, when the muscles are relatively cool, the muscles don't extend (stretch) as

much, and the emphasis of the posture's stress is transmitted more directly (but not exclusively) into the tissue in and around the joints. For this reason, Yin Yoga postures tend not to have the same significant range of motion as Yang Postures.

As a teacher it is important to remind students of this so that they don't try to replicate their Yang Postures in a Yin Yoga context. If they were to do so, they might pull or strive too hard and subsequently over-stretch their ligaments because they were pushing past a Yin appropriate level of stress.

Section 2: Why Practice Yin Yoga? The Physical Benefits

The Main Intention

The main intention of Yin Yoga is to help **maintain** or **regain** the health of the body and mind. This training focuses on elements of physical health, but the energetic and mental influences of the practice can never be extracted from the whole.

That said, the main physical benefit of Yin Yoga is that it helps promote the health of dense connective tissues, especially those tissues that compose our joints. The intention of Yin Yoga is NOT to create excessively great ranges of motion or spiritually impressive ranges of motion; rather to offset tissue deterioration and maintain its usability!

There are no studies that I'm aware of on Yin Yoga to date. So this list of physical benefits is speculative based on a few things: 1) research done on humans and animals involving long-held passive stretches and 2) the collective experience of bodyworkers and yogis whose own work and experience strides ahead of scientifically confirmed knowledge (aka, anecdotal evidence).

Benefit: Hydration of Tissues

There are a couple of mechanisms by which loading and unloading (stressing and releasing stress) our tissues will increase the hydration level of those tissues.

One possibility that is speculative at this point is that mechanical stresses do stimulate fibroblast activity. And as fibroblasts become more active, they may produce more glycosaminoglycans (GAGS) which, in turn, would attract more water into the extra-cellular matrix. But, as of this writing, I'm not aware of any studies that look directly at this specific mechanism.

But what is more established is that the connective tissue, which is sponge-like, squeezes out water during the loaded phase of a stretch and then upon releasing that stretch – during the rest phase – the same tissue absorbs more water than it previously held prior to the stretch.

This is summarized in a report on a study done by Schleip, et al, entitled: "Strain hardening of fascia: static stretching of dense fibrous connective tissues can induce a temporary stiffness increase accompanied by enhanced matrix hydration."

"Subject to similar loading procedures, tissues showed decreases in fluid content immediately post-stretch and increases during rest phases. When allowed sufficient resting time, a super-compensation phenomenon was observed, characterized by matrix hydration higher than initial levels and increases in tissue stiffness. Therefore, fascial strain hardening does not seem to rely on cellular contraction, but rather on this super-compensation. Given a comparable occurrence of this behavior in vivo, clinical application of routines for injury prevention merit exploration."

This "super-compensation" is simply the process whereby the tissue "soaks up" more water than previously held before or during the stretch. The tissue is called "strain hardened" because it has become "stiffer" due to increased presence of water. This tissue is thereby stronger and more resistant to compressive forces and better able to absorb shocks.

Fascial expert, Tom Myers describes it like this in a blog from his website www.anatomytrains.com called "Q and A with Tom: Hydration and the Fascial Matrix":

"The water in the fascia has been divided into 'bound' and 'free', though this designation is still a little controversial. 'Free' would be fluid (again, largely water) just 'passing through' the fascia, as interstitial fluid passes by all the cells – to deliver food and pick up the garbage (UK: rubbish). Bound water, though, is very interesting – it is 'bound' to the glycosaminoglycans (GAGs – snotty mucous) part of the fascia, which binds water in the same way Jell-o binds water – to fern-like molecules that can bind a lot of water molecules (and affect millions more nearby).

The molecules that hold the water look like ferns (someone else said a toilet brush – how unaesthetic!), and each 'frond' dog the GAGs binds water. The controversy is that some assert that all water in the body is bound in some way, that none of it is free, but I still think it's a useful distinction to make between water passing through, and water bound into the tissue.

Whatever the case in this regard, the water – like the water in the goldfish bowl – needs to be changed frequently. Drinking good water is helpful, but what really squeezes the old water (and impurities and cytokines) out of the fascia is 'wringing the sponge' of the tissue, which occurs with stretching, exercises, and upping the core body temperature."

Benefit: Detoxification

There are two potential - not mutually exclusive - mechanisms by which yoga, and specifically Yin Yoga, can assist in the removal of toxins from the body. But before exploring those mechanisms, it will be helpful to clarify what is meant by a toxin.

A toxin is a poisonous substance that in relatively small doses can cause disease. In our bodies there are two types of toxins to consider, exogenous and endogenous toxins.

Exogenous toxins are toxins that are produced outside of your body, and include environmental toxins, recreational and some prescriptive drugs.

Endogenous toxins are toxins that are produced inside your body, usually as a waste product of metabolic activities.

There are a few ways by which both types of toxins may get 'trapped' in the extracellular matrix.

1. **Excessively Cross-linked Collagen Fibers.** In this scenario, if the body is immobilized, inflamed, or under chronic stress, the connective tissue may contract, leading to an increased presence of cross-linked collagen fibers in the matrix. These fibers lose their healthy "organization," becoming more densely "disorganized" and more felt-like (think of adhesions, fibrosis, and scars), as well as losing the optimal distance between adjacent fibers. This is called losing inter-fibrillar distance.

Such dense, more disorganized, pathologically cross-linked fibers cause the tissue to become drier, thereby trapping toxins within the "tangle" of excessively cross-linked collagen. Solution: by gently stressing the extracellular matrix, you can break up these cross-links, promote healthier fibril distance, and allow the toxins to be released and reabsorbed into the circulatory and lymphatic system.

2. **Solidified Ground Substance:** Related to the previous mechanism of releasing toxins, the ground substance, or gel, can also retain toxins if it is left immobile. Recall from the section on Ground Substance, that when it is left immobile, the gel settles into a more solidified state (thereby trapping toxins) whereas when the gel is stressed, moved, or exposed to heat, it will change phases into a more solute state, permitting the "flushing" out of trapped toxins.

At this point of writing, I'm unaware of any studies examining these mechanisms, but these theories are born out by the experiences of yogis and bodyworkers who notice common symptoms of toxic discharge as a consequence of either their yoga practice or bodywork treatment. Symptoms: increased thirst, headache, darker urine, generalized body aches, irritability.

James Oschman in his book *Energy Medicine, The Scientific Basis* summarizes the theory around this mechanism of detoxification:

"Another effect of the gel-to-sol and return-to-gel transitions is the release of toxins that have been trapped in the sponge-like interstices of the ground substance. It is likely that the toxins and metabolic waste products can accumulate in connective tissues, particularly in areas that have become densified as a response to trauma or structural imbalance... The connective tissue gel can trap materials both mechanically (because of small channels between its fibers) [mechanism 1 above] and electrically (because of its abundant negative charges). Pressure releases these trapped materials, some of which may have been stored for many years. They are released into the interstitial fluid and carried away by the lymphatic and venous drainage, and excreted."

It's important to remember when speaking about the phase change of the ground substance that its shift into a more solute state is not permanent. So when we stress, stretch, and move the body, the ground substance shifts from a more solid state to a more fluid state, we could say the ground substance and extra-cellular matrix "opens up," releases trapped toxins, and then after some time, the ground substance reverts back to a more solid state, *i.e.* "Closing up" again.

Benefit: Preventing Contracture

Joint Contracture is the phenomenon whereby the dense connective tissues around the joints, ligaments and capsular tissue, become shortened, limiting range of motion and causing joint dysfunction. There are many potential causes of joint contracture, but immobilization, injury, and inflammation are the main causes.

A classic example of joint contracture is frozen shoulder syndrome, whereby grandpa slips on ice while shoveling his walkway, and he fractures his wrist. He goes to the doctor, his wrist is put in a cast, and his arm is held immobilized in a sling for several weeks while the wrist heals. But once the fracture in his wrist is healed and the cast and sling are removed, grandpa finds he can no longer reach for his coffee in the cupboard because his shoulder is now frozen. This has occurred because the connective tissues in his shoulder have shrunk due to the shoulder's immobilization. The shoulder's tissue has contracted. And the

treatment is mobilization. Gentle, mild tensile stresses (*i.e.* Yin Yoga) are very beneficial for releasing the contracture in the dense connective tissues.

There are a few studies that support the idea of Yin Yoga-type stresses being beneficial and optimal for releasing joint contracture.

One study, done by George Hepburn, PT, entitled: "Contracture and Stiff Joint Management with Dynasplint" created a very mild tension in contracted joint tissue with a device called a Dynasplint. The effects of this intervention were compared against the effects of shorter, more intense stretches. Hepburn's results:

"Optimal plastic deformation of the tissue results with applications of long periods of low force stretch. The tissue slowly remodels because a biochemical response, triggered by constant force, results in a loosening and shifting of the fibers' connecting points within the tissue. By contrast, elongation of shortened connective tissue, through short periods of forceful stretching, relies upon attempt to mechanically break or tear the connecting points. Typically, with short periods of high force stretching, the result is a higher proportion of elastic response, less remodeling, and greater trauma and weakening of the tissue."

"The overwhelming conclusion of clinical evidence throughout the literature and confirmed by this study, clearly states that the longest period of low force stretch produces the greatest amount of permanent elongation, with the least amount of trauma and weakening of the connective tissues, thereby more fully restoring range of motion as quickly as possible."

Another study by Sarah Corey, et al., entitled: "Stretching of the Back Improves Gait, Mechanical Sensitivity and Connective Tissue Inflammation in a Rodent Model," looked at a similar phenomenon in the lumbar fascia of rats. These researchers injected an inflammatory agent in the lumbar fascia of rats, which "resulted in altered gait, increased mechanical sensitivity of the tissues of the low back, and local macrophage infiltration." They then stretched one group of these rats, gently, for 10 minutes, twice a day for 12 days, while the other group of rats received no stretching intervention. "Mechanical input was then applied to this model as in vivo tissue stretch for 10 minutes twice a day for 12 days."

The conclusion: "In vivo tissue stretch mitigated the inflammation-induced changes leading to restored stride length and intra-step distance, decreased mechanical sensitivity of the back and reduced macrophage expression in the non-specialized connective tissues of the low back." In other words, the rats that were stretched returned to their normal, healthy rat-selves, while the non-stretched rats continued to limp around in pain. Another conclusion: you don't have to be a rat to do Yin Yoga.

Sitting in chairs and living a sedentary life make us vulnerable to the experience of contracture. Yin Yoga offers a safe and intelligent way to counteract the effects of contracture in our joints. As Paul Grilley says, "A Saddle or a Seal a day is the antidote to a lifestyle of chair-sitting."

Benefit: Preventing Degeneration

The Theory of Exercise asserts that all tissues need to be appropriately stressed in order to maintain their health and integrity. In yoga practice, our bones, connective tissues, and muscles all receive various kinds of positive stresses to maintain their health.

Yin Yoga specifically targets the joints - the connective tissues and bones - in a unique way. By appropriately stressing the ligaments, joint capsules, discs, and menisci, we can prevent these tissues from prematurely degenerating.

Specifically, bones need stress to maintain optimal density. If our bones don't receive adequate weight-bearing loads, they become porous, either leading to osteopenia (weakened bone) or osteoporosis (porous bone). Many factors can lead to these conditions, but dis-use atrophy, *i.e.* weakening from lack of use, is one cause we can mitigate with yoga, in general, and Yin Yoga, specifically.

One of the most common areas of lowered bone density is the lower back. It is theorized that the Yin Yoga postures that target the lower back, *i.e.* Sphinx, Seal, and Saddle, constitute a weight bearing 'exercise' on the bones of the lower spine. I know of no studies that have looked at this (there haven't been any studies on Yin Yoga), but I have heard numerous reports from students diagnosed with osteopenia who have increased their bone density. And that increase in density is correlated with their practicing more Yin Yoga.

Again, Yin Yoga wouldn't want to be the only tactic in your strategy to combat bone density loss, but in conjunction with weight training, or Yang Yoga, Yin Yoga will stress your bones in the lower spine in ways that other systems of exercise won't.

Benefit: Release Joint Fixation

There are three things that cause our joints to make noises such as pops and cracks. Generally these three reasons are 1) release of gas (such as when we crack our knuckles), 2) friction (when things rub against each other), and 3) fixation (where joint surfaces are stuck together). Friction, usually, can be done again and again and is caused when surfaces rub against each other, such as snapping your fingers. The key with friction is whether or not there is the presence of pain. If accompanied by pain, movements causing friction should be avoided, but if there is no pain, the friction is generally deemed benign.

The third source of joint sound is the release of fixation.

Bernie Clark has written, "There are three conditions for fixation to occur: first, the two surfaces that are getting stuck together must be smooth; second, there must be some liquid lubricant between the surfaces; finally, the surfaces must be under some pressure that pushes them together."

A common example of fixation is that of a pint of beer resting on top of a beer coaster. Between the two smooth surfaces of the pint glass and the coaster, condensation and/or beer gets in the middle. Under pressure for some time, a vacuum seal can form, and when you "raise your glass," you often will find that the coaster comes with the pint. The reason: the bottom of the pint glass and the coaster have become fixated. Solution: push on the coaster, and break apart the fixation.

Now, this occurs in our bodies, too. Especially in our sacro-iliac and facet joints of our spines, where smooth boney surfaces with synovial fluid in the middle can be pressed together under the force of gravity in an immobilized position for periods of time, causing the natural – and important – small

amounts of movement in these joints to be lost due to fixation. The solution: apply appropriate force to these joints to release this fixation. You will hear a popping or cracking sound when this occurs, and there will always be a sense of release, *i.e.* it feels good.

Moreover, releasing fixation prevents the more serious condition of fusion from occurring, whereby a more permanent loss of mobility is established.

Benefit: Maintaining Structural Integrity

The human spine is a S-shaped, double curve, where the lumbar and cervical aspects of the spine curve in one direction, called lordosis, and the thoracic spine curves in the opposite direction, called kyphosis.

If any of these curves are too little (hypo) or too much (hyper), then dysfunction and pain may develop.

For many, because of sedentary habits (working at desks, leaning over computers all day), we tend to lose the lordosis in our lumbar (fascia contracts with the lumbar in a flattened position), we tend to increase the kyphosis of the thoracic spine (hump back), and our heads are chronically forward tilted (text neck). Gently, taking these areas of our spine in the opposite direction, and remaining still for several minutes, helps to counteract the negative impact of these lifestyle factors, and helps to maintain the structural integrity of the spine.

Section 3: Connective Tissue and Fascia

Types of Tissue:

There are four main types of tissue in animal systems. A tissue can be thought of as a collection of cells that share a similar purpose and arrangement.

They are:

1. **Epithelial Tissue** (lines the cavities and surfaces of structures throughout the body, and also forms glands. Provides protection, regulates exchange, cells touch)
2. **Nervous Tissue** (main component of the Nervous System, consisting of neurons and neuroglia cells)
3. **Muscle Tissue** (Contractile tissue of animals; function is to produce force and cause motion.)
4. **Connective Tissue** (Fibrous tissue; includes: cartilage, bone, adipose tissue, tendons, ligaments, blood, fascia)

Connective Tissue

Until the last few decades, Connective Tissue was not treated with much interest by western biomedicine. It was consigned to the lowly role of being the "inert packing material" of the body – binding, supporting, and protecting other more important things in the body. This view, however, is changing. More and more, Connective Tissue (Extra-cellular Matrix, Fascia, *see below*) is seen as a single **biomechanical regulatory system**. The Connective Tissue is a system of intra-body communication, generating a sense of where and how the body is.

The following passages are meant to convey a sense of the Connective Tissue's *everywhereness*, and the unique importance of this system.

"In the simplest possible terms, the ECM (extra-cellular matrix) is involved in every process and function of the body. It also serves as the body's **intranet** [emphasis mine] - a private internal communication network. The ECM makes sure all the cells are in communication with all the other cells, creating a body-wide signaling network (Oschman 2003, Langevin 2006) that transmits mechanical signals such as strain and vibration throughout the entire organism via the fascial web." (Lesondak, *Fascia - What is it and why it matters*, 2017)

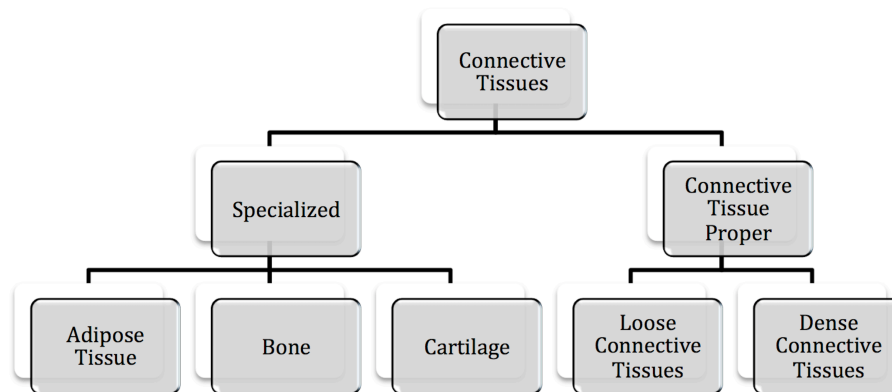
Connective Tissue is "a broad term that refers to biological tissues that are used to bind, support, and protect other tissues. CT is extracellular, which simply means the tissues are not cells in themselves, but are the materials surrounding and in between cells. We are referring here to dense CT that includes tendons and ligaments.... When we have no other term to give the CT, fascia is often the term used. Fascia might be considered "loose" connective tissue." (Clark, *Yinsights*, 2007)

"Connective tissue is very aptly named. Although its walls of fabric do act to direct fluids, and create discrete pockets of tubes, its uniting functions far outweigh its separating ones. It binds every cell in the body to its neighbors and even connects, as we shall see, the inner network of each cell to the mechanical state of the entire body." (Myers, *Anatomy Trains*, 2011)

“The muscle-bone concept presented in standard anatomical description gives a purely mechanical model of movement. It separates movement into discreet functions, failing to give a picture of the seamless integration seen in a living body. When one part moves, the body as a whole responds. Functionally, the only tissue that can mediate such responsiveness is the connective tissue.” (Schultz, *The Endless Web*, 1996)

"The most important thing to keep foremost in mind, at all times, is that the fascial net is one continuous structure throughout the body. So, imagine a silvery-white material, flexible and sturdy in equal measure - a substrate that surrounds and penetrates every muscle, coats every bone, covers every organ, and envelops every nerve. Fascia keeps everything separate yet interconnected at the same time. It is a tissue that, up until recently, was thought to be inert and lifeless (Schleip 2005, Schleip et al. 2006)." (Lesondak, *Fascia - What it is and why it matters*, 2017)

Classifications of Connective Tissue: Specialized vs. Connective Tissue Proper (Various types of Fascia)

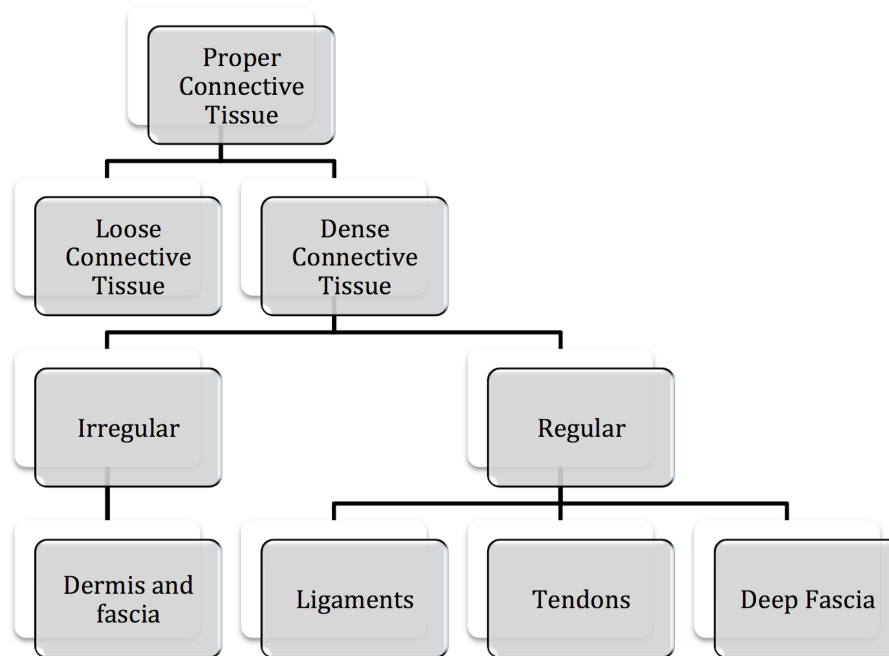


By this point you may be wondering what the difference is between Connective Tissue and Fascia. And that's a good question. Historically, the term fascia has been used to refer to sheets of fabric, such as aponeuroses: plantar fascia, thoracolumbar fascia, fascia lata, etc. But, increasingly the term fascia is being used more broadly to include all collagenous soft-tissues in the body, which includes tendons, ligaments, the fascia around and in the muscles, as well as visceral fascia that surrounds organs.

In the diagram above, the term Fascia would refer to all the types of Connective Tissues listed under "Connective Tissue Proper" (as well as Cartilage), where Superficial Fascia is a type of Loose Connective Tissue, and Deep Fascia would refer to various Dense Connective Tissues.

While this may seem confusing at first, just know that in layman's terms, people are using fascia and connective tissue more or less interchangeably.

Let's now look more closely at the types of Connective Tissue Proper /Fascia:



(Connective Tissue Classifications from *Functional Atlas of the Human Fascial System*, Carla Stecco)

Loose Connective Tissue:

- Most widespread tissue in the body.
- Characterized by an abundance of ground substance, relatively few fibers and cells. Main cellular components are fibroblasts and adipocytes.
- Viscous, gel-like consistency
- Allows gliding between the various muscles and organs
- Permits the diffusion of oxygen/nutrients from small vessels to the cells and the diffusion of metabolites back to the vessels.
- It is the initial site where antigens, bacteria and other agents that have breached an epithelial surface can be destroyed.

Dense Connective Tissue:

- Characterized by large, robust, collagen fibers that provide considerable strength
- Fibers are so numerous that the key identifying trait is the absence of open spaces between cells or fiber
- Fibroblasts are the only cells visible and arranged in rows between the fibers.
- Main roles of dense CT are to transmit forces over a distance and to connect different organ/ muscles. Collagen fibers are disposed along the direction of mechanical loads present in that specific tissue.

Dense Irregular Connective Tissue:

- Irregularly arranged collagen fibers and usually comprises the dermis and fascia. “In the last few

years, it has been demonstrated that the irregular appearance of deep fasciae may be due to its multilayered structure, but in actuality each layer presents its own regularity.”

Dense Regular Connective Tissue:

- Collagen densely packed, arranged in parallel to the direction of forces exerted on the particular body part
- Found in tendons and ligaments, as well as deep fascia (epimysium and perimysium have specific organizational structure)

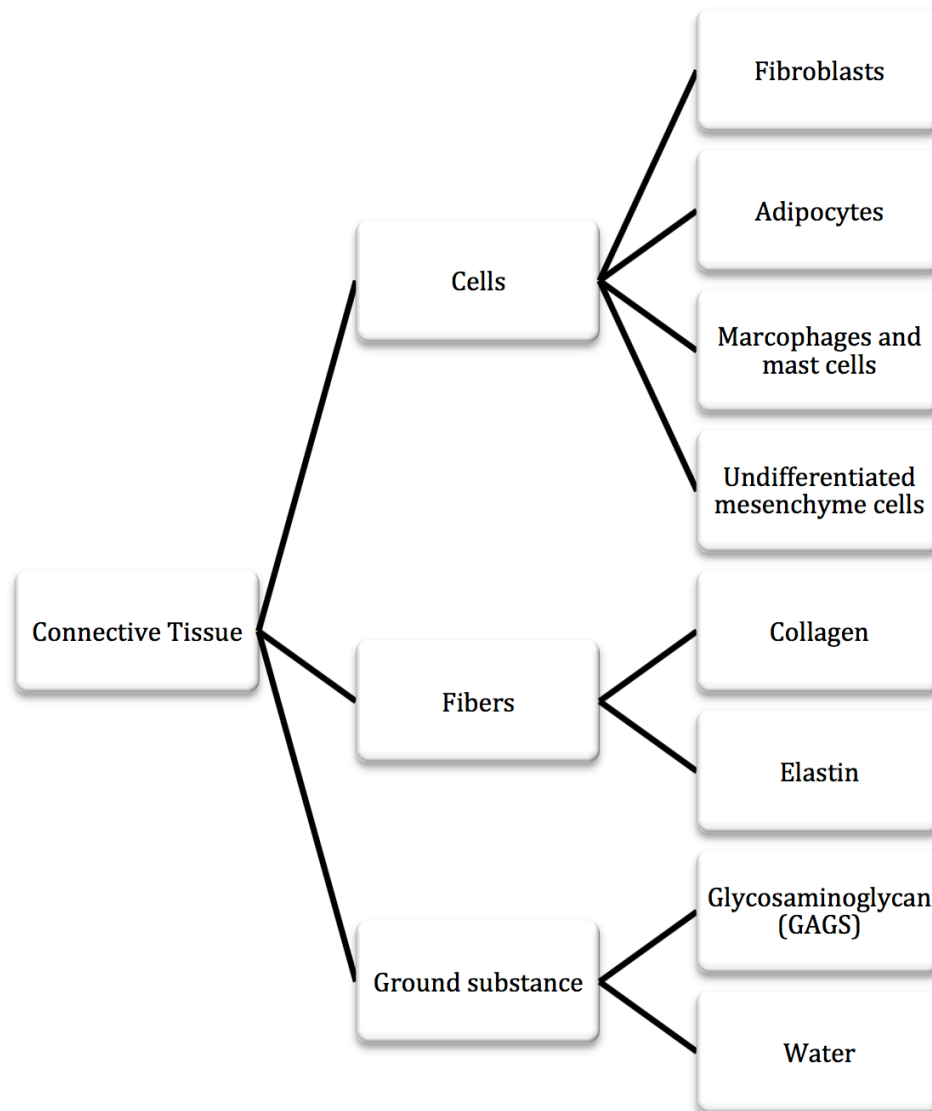
Dense Regular Connective Tissue classified by function:

- Connecting two bones: ligaments
- Connecting muscles to bones: tendons
- Connecting muscles to each other: deep fascia
- Connecting muscles to fascia: myofascial expansions

The Key Players of Connective Tissue: Cells, Fibers and Ground Substance

Technically, connective tissue is extra-cellular, meaning its non-cellular material. Tom Myers defines fascia/connective tissue as "the environment that your cells live in." For this discussion, we will look at some of the cells found within the Extra-Cellular Matrix because they help shed important light on the overall functions of connective tissue as a communicative network, and also suggest ways that stimulating the fibrous network of connective tissue is of overall systemic benefit.

Depending on the ratio between Fibers and Ground Substance, any given form of Connective Tissue will have different bio-mechanical properties. In general, the fewer fibers and more ground substance a tissue has, it will be more fluid and gel-like. If a tissue has more fibers, especially collagen fibers, and less ground substance, the tissue will be stiffer, stronger and less extensible.



Cells: Macrophages, Adipose Cells, Mast Cells, Fibroblasts

The first three cells listed here are found primarily in Loose Connective Tissues, whereas Fibroblasts are the only cell found in Dense Connective Tissues.

Macrophages: macrophages found in connective tissue are associated with wound healing and scavenging cellular debris (through phagocytosis)

Adipose Cells: Adipose tissue plays a key role in heat production, fat storage, and breakdown into free fatty acid. It protects deep fascia against physical trauma and provides thermal insulation.

Mast Cells: Mast cells are involved in synthesizing and secreting chemical mediators such as histamine and heparin to manage allergies, and are involved in wound healing and defense against pathogens.

Fibroblasts: These are the principal cells of connective tissue. They produce (think blast) both the fibers of the extracellular matrix, but also the interfibrillar substances that make up the viscous, gel-like ground substance. Tom Myers calls fibroblasts, "the migratory workers of the extra-cellular matrix."

David Lesondak writes, "The fibroblast is the most abundant cell in the fascia. It is the builder, custodian, demolition squad, and EMT (Emergency Medical Technician) for the entire extracellular matrix. Essentially, they produce and maintain the entire extracellular matrix."

Under tension, the fibroblasts produce more collagen, and organize themselves along lines of force. Stretching and applying pressure or tension to fascia stimulates fibroblasts, as noted by Gehlsen, Ganion, and Helfst (1999): "Such studies have shown increased production of fibroblasts and ground matrix macromolecules, as well as orientation of newly formed fibroblasts along lines of force. Hence, mechanical force can influence fibroblasts to modify their physical and chemical properties as a result of light perturbations to the human body. This will result in changes in the fascia composition at any one time, depending on the stresses placed upon it throughout an individual's lifetime." (Lindsay, *Fascia*, 2008)

And when the body is injured, fibroblasts can change into myofibroblasts, which act like the body's EMT cells, swooping in to release cytokines to enhance the inflammatory response as well as contract injured tissue together, to repair wounds.

Fibers

Collagen:

"Collagen, the most abundant protein in the mammalian body, is generally regarded as a primary structural component of living tissue. In higher vertebrates, collagen constitutes one-third or more of the total body proteins. Collagen contains three chains of amino acids wound in a triple helix. [This three-stranded helix structure makes the collagen extremely strong.] The two major physical properties of collagen fibers are their great tensile strength and relative inextensibility [non-stretchy].

"Collagenous fibers appear virtually colorless or off-white. They are arranged in bundles and, except under tension, are characteristically wavy. Collagen fibers are capable of only a slight degree of extensibility but are very resistant to tensile stress. Therefore, they are the main constituents of structures such as ligaments and tendons that are subjected to a pulling force." (Alter, *Science of Flexibility*, 2004)

While there are many types of collagen, Type 1 Collagen is the most abundant, found in skin, bones, tendons, ligaments, deep fascia. While collagen is built to resist tension (not stretch), most collagenous tissues can stretch about 10 percent of their resting length before damage or permanent changes occur. We could consider collagen to be a "Yin" fiber because of its strength and resistance to stretch.

Elastin:

Made from the protein elastin, "elastic tissue is a primary structural component of living tissue and is found in various quantities throughout the body.... Elastic tissue plays a major role in determining the possible range of extensibility of muscle cells. In certain locations, large amounts of almost pure elastic fibers can be found, particularly in the ligaments of the vertebral column. Consequently, to a major extent,

elastic tissue determines ROM.

“Elastic fibers perform a variety of functions, including disseminating stresses that originate at isolated points, enhancing coordination of the rhythmic motions of the body parts, conserving energy by maintaining tone during relaxation of muscular elements, providing a defense against excessive forces, and assisting stretched organs in returning to their natural configuration.” (Alter, Science of Flexibility) In contrast to collagen, elastin can stretch up to 230 percent of its original length and subsequently return to its original shape. Therefore, we could consider elastin to be a "Yang" fiber because of its flexible and stretchy qualities.

Ground Substance or Gel

Ground Substance is the viscous, gel-like fluid that fills the spaces between the fibers and the cells in our connective tissues. Some types of connective tissues have a greater percentage of ground substance, while other types of connective tissues have little ground substance.

Ground Substance is made up of water and proteoglycans (PG). The latter, proteoglycans, are protein chains with many smaller molecules called glycosaminoglycans (GAGS) arranged along the spine of the protein in a fern-like manner.

GAGS are extremely *hydrophilic*, meaning they "love water", or draw water to them, binding water to them molecularly. The hydration of our tissue, in part, is dependent on GAGS to draw and hold water in the extracellular matrix. Common types of GAGS include chondroitin, heparin and hyaluronan, popularly, but inaccurately, called hyaluronic acid. Hyaluronan is capable of attracting 1,000 to 8,000 times its weight in water towards itself (hydrophilia).

“Due to its highly viscous nature, hyaluronan (HA) lubricates collagen, elastin, and muscle fibers, allowing them to slide over each other with minimal friction. This lubrication is vital in preventing collagen fibers from forming cross-links and adhering to one another.” (Lindsay, Fascia, 2008)

Functions of Ground Substance

Hydrated ground substance has several primary functions besides structural support. Hydrated ground substance is a medium of exchange, cushioning, defense and lubrication.

1. **Diffusion:** “Due to its high proportion of water content, a primary function of ground substance involves diffusion of nutrients and other substances including gases, hormones, white blood cells, antibodies, and cellular waste. This property is important to the cells in the surrounding area since it provides a means of exchanging substances between blood and cells. Proper diffusion rates will help keep the cells healthy and functioning effectively and efficiently.
2. **Absorbs Stress:** “The high water content of ground substance also enables it to absorb and disperse shock throughout the body. If the ground substance of fascia has inadequate water content at the time of injury or trauma, the body cannot efficiently absorb and disperse the impact of forces upon it.
3. **Protective barrier:** “While ground substance is an effective exchange medium, it also functions as an important barrier against any invading bacteria or other microorganisms. Since connective

tissue cells are part of the reticulo-endothelial system, they provide the first line of defense against invading organisms.

4. **Lubrication:** "Ground substance also functions to keep the connective tissue fibers lubricated to allow easier sliding over one another, although this is more a function of hyaluronic acid. Collagen fibers that approximate one another can potentially adhere together if a certain distance, known as critical interfiber distance, is not maintained between them. The ground substance, which provides some of the tissue volume, can effectively maintain the distance between fibers to prevent microadhesions and maintain extensibility." (Lindsay, Fascia, 2008)

Section 4: Fascial Properties and Concepts

Force, Mechanical Load, and Deformation

In all forms of yoga, exercise and daily life activities, we are constantly subjecting our body to various kinds of forces or stresses. Whenever we walk, bend, stretch, or pick something up, forces (pushes and pulls) are being transmitted into and through our bodies. In technical terms, the forces applied to our tissues are frequently referred to as mechanical loads.

If the material that is experiencing the force changes size or shape while under a mechanical load, that change in the material is referred to as deformation (think "changing form"). In our bodies, the tissue we tend to talk about is soft tissue, either fascia and/or muscle. When this tissue is stressed, *i.e.* a force is placed upon it, and this tissue lengthens (for example), this would be a lengthened deformation.

The tissue's response depends "upon such variables as the type of material (that is being stressed), the amount of force, the duration of force, and the temperature of the material, to name a few." (Alter, Science of Flexibility, 2004)

But just because a tissue receives a force/mechanical load/stress does NOT mean significant deformation will occur. Many people think that by stressing our joints in Yin Yoga we will inevitably cause our joint tissue to stretch, thereby destabilizing and weakening the joint. But this is a misunderstanding of the practice. The intention of Yin Yoga is to gently, and safely, stress the tissue, and not cause permanent forms of unhealthy deformation in the joint tissue.

Three Types of Forces:

In all yoga postures, we will be creating one or multiple of these various types of forces in the body.

1. **Compressive:** Compressive forces occur when a material (tissue) is pressed together from opposite sides along a relatively straight line. Generally the tissue becomes squeezed, shorter and wider. Compression tends to be maligned by yoga teachers who blindly bleat, "Don't compress!" But avoiding compression all together would fail to stress tissues, leading to atrophy or degeneration. The key is to generate appropriate compressive stresses.
2. **Tensile:** Tensile forces, or tensions, occur when a material (tissue) is pulled in opposite directions along a relatively straight line. If the length of the tissue increases under this force, the layperson usually says that the tissue has "stretched." The deformation due to tension is stretch.
3. **Shear:** Shear forces occur when the forces applied to a material (tissue) are opposite of each and parallel, but not along or in a straight line. Here think of the two blades of shears, gliding past each other, parallel, but not butting into each other. Twisting the spine is a shear type force.

Often, when I teach, I take great pains to lay out the difference of intention between stressing tissue and stretching tissue. In Yin Yoga, some tissues will stretch - such as the fascia in and around our muscles, but some - like the dense connective tissues around our joints - will merely, in most cases, receive a health-inducing stress.

Stress here is defined or "measured by the force applied per unit area that produces or tends to produce deformation in a body." (Alter, Science of Flexibility, 2004)

Four Properties of Material

Depending on the composition of the tissue being stressed, the tissue will possess different qualities which influence the outcome of that stress. Those qualities are: elasticity, plasticity, viscosity and viscoelasticity.

Elasticity. Elasticity is the property of a tissue to return to its original shape after the force/stress upon it has ceased. Imagine an elastic band that, if two sides are pulled in opposite directions, will stretch a considerable amount (extensibility), but how after the stress is removed, the elastic band returns to its original shape/length. Extensibility is the capacity of a tissue to "extend", *i.e.* lengthen, but has nothing to do with whether that tissue can return to its original shape.

Plasticity. Plasticity is the property of certain tissues to permanently deform if they are stressed beyond their elastic capacity. In other words, some tissues, if sufficiently stressed, will NOT return to their original length/shape. Example: think of a plastic bag that if "over-stretched" will not return to its original shape. In yoga land, this is the fear around stretching ligaments. If they overstretch, ligaments don't return to their original length.

Viscosity. Viscosity is the property of materials/tissues to resist flow. The strength of resistance in viscous materials is time dependent. Short, brief loads of force increase viscosity; whereas long loads of force decrease viscosity and increase flow. "A plunger immersed in a fluid (e.g., a syringe) classically illustrates viscosity. The faster one tries to move the plunger, the higher the pressure within the fluid. A practical implication is the advantage of slow versus rapid flexion and extension of the spine. The former results in less viscosity and stiffness in the spine." (Alter, Science of Flexibility, 2004) Another variable at play with viscous materials is temperature. Warmer materials display less viscosity, whereas colder materials more. Think of how warm honey flows easily compared to the viscosity of cold honey. Warm is less viscous and flows more readily.

Viscoelasticity. "Fascia is a colloid. Gels and emulsions are colloids. A colloid is a substance that contains particles of solid material suspended in a liquid. So, basically, a colloid is both fiber and fluid. As a colloid, fascia exhibits a quality known as viscoelasticity. Viscoelastic materials exhibit both viscous and elastic properties when under pressure." (Lesondak, Fascia, 2017). What this means is that when fascia is under a stress/pressure for some time it's viscous property starts to reduce and the fascia starts to flow (lengthen in the case of tensile stress). Once that stress/pressure is removed, the elastic property of the fascia starts to bring the fascia back to its original shape/length.

Creep. Fascia's ability to slowly deform under pressure/stress is called creep. "If the load is manageable, the fascia will gradually adapt to it in appropriate ways. Once that load is removed it will gradually return back to its original shape, or 'creep' back... However if the load is excessive or repeated excessively over a long period of time with no counterbalancing intervention, the fascia can become damaged." (Lesondak, Fascia, 2017)

Because our fascia/connective tissues possess this trait of creep, we want to be careful with the joint

tissues we stress in Yin Yoga. After a pose/practice, it's a good idea to give the targeted regions some time (estimate 30min - 1hr) to "creep" back before engaging in more strenuous activity.

Cross-linking

Cross-linking refers to the covalent chemical bonds that bind collagen fibers to each other. In the preparatory online course, I borrowed Bernie Clark's metaphor to compare these cross-links to the rungs of a ladder. The more cross-links between fibers, (more rungs between the poles of a ladder) and the stronger and stiffer this tissue becomes. The fewer cross-links, the more mobile this tissue becomes.

"In a sense, cross-links weld the building blocks [collagen fibers] into a strong, rope-like unit. The number of cross-links may be related to collagen turnover; that is, collagen is continuously and simultaneously being produced and broken down. If production exceeds breakdown, more cross-links are established and the structure is more resistant to stretching, as in the case of scar tissue." (Alter, Science of Flexibility, 2004)

So cross-linking is important. It gives collagenous tissue its strength. But in excess, too much cross-linking leads to what is referred to as "pathological cross-linking," what many refer to as adhesions and scarring.

Yin Yoga provides one way of stressing the connective tissue matrix to gently begin to break up these pathological cross-linking. Rolling on lacrosse balls and foam rollers is another means of achieving this end, as are many modalities of bodywork.

Causes of cross-linking:

*"The bonding between cross-bridges provides structural support to normal connective tissue. However, injury, chronic stress by dehydration, and immobility cause excessive bonding and lead to the formation of scars and adhesions, which limit the movement of these usually resilient tissues. With dehydration, the complexes gradually disappear from the ground substance. As a result of less water bound, the bulk of the ground substance diminishes. As this process takes place, excessive cross-linking between collagen fibers occurs. As more and more molecules cross-bind, the involved connective tissue becomes less elastic. This will result in a tissue that has lost elasticity because the collagen fibers and fascial sheets have lost their ability to slide freely over one another. The loss of the tissue's lengthening potential is not due so much to the volume of collagen, but **to the random pattern in which it is laid down and to the abnormal cross-bridges that prevent normal movement patterns.** Following tissue injury due to dehydration, it is essential for the human body to undergo rehydration followed by some passive activity to help prevent maturation of the scar tissue in fascia and further development of adhesive cross-links." (Lindsay, Fascia, 2008)*

Tensegrity

Tensegrity is a concept coined by the American architect Buckminster Fuller – an eccentric and esteemed graduate of my high school – that is the mash-up of two terms: tension and integrity.

Tom Myers, in Anatomy Trains, writes, Tensegrity, "refers to structures that maintain their integrity due primarily to a balance of woven tensile forces continual through the structure as opposed to leaning on

continuous compressive forces like a stone wall. "Tensegrity describes a structural relationship principle in which structural shape is guaranteed by the finitely closed, comprehensively continuous, tensional behaviors of the system and not by discontinuous and exclusively local compressional members."

David Lesondak, in *Fascia*, writes, Tensegrity is the model, "that most closely reflects our own architecture, with the bones being the discontinuous, compression-bearing struts, and connective tissue being the cabling maintaining the tension. In fact, Dr. Levin found that bones do not compress with each other and their joint surfaces but rather our bones float, like the rods in Snelson's sculptures, in the fascia and associated soft tissue." And... "When referring to biological organisms, **biotensegrity** states that the body's 206 bones (compression struts) are being pulled up and held aloft against the force of gravity by the tensile force of fascia, ligaments, and tendons (tensional members)."

This tensegrity model applies to the organism at large (macro-tensegrity) as well as to the architecture of each individual cell (micro-tensegrity). It's tensegrities all the way up, and all the way down.

Mark Lindsay, in *Fascia*, writes, "Applying force to one area of a tensegrity structure will result in restructuring of the whole in order to accommodate. Again, quoting Donald Inger, 'An increase in tension of one of the members results in increased tension in members throughout the structure, even ones on the opposite side.' This situation can be compared to that of the spider web. If something gets caught within one end of the spider web, the whole web shifts, or is pulled, to that side. Tension occurs even in areas far removed from the snag in the web."

Mechanotransduction

Mechanotransduction is the phenomenon whereby a cell converts mechanical signals (stresses) into biochemical responses/reactions.

Cells have a variety of receptors on their membrane which monitor the extracellular environment for chemicals, hormones, etc. But a special type of receptor, called the integrin "forms a physical and informational link between the extracellular matrix and the interior of cells." (Langevin, 2009)

"What makes integrins unique is that they respond not to chemical stimuli but to mechanical stimuli. They are sensitive to both stretch and vibration. It is as if each cell in the body was plugged into the ECM so that it can also monitor the environment by listening to it. When the integrin is stimulated, it responds by creating electrochemical changes at the cellular level. The process of creating change via mechanical pressure and vibration at the cellular level is called mechanotransduction." (Lesondak, *Fascia*, 2017)

Thixotropy

Thixotropy from the Greek words *thixis* (touch) and *tropos* (transformation), describes the state of a substance as a result of agitation or movement. If a thixotropic substance is left alone, it tends to solidify, but if it is heated, moved or 'mechanically agitated' it tends to become more fluid-like. Think of honey and how it would behave if were to be removed from a refrigerator versus how the same honey would behave if it were gently heated in a pot of water over the stove. In a cold state, the honey is quite viscous and solid. In a warm state, honey is more liquid and fluid.

The ground substance in our connective tissues possesses thixotropic properties.

"With increasing age, the ground substance content in connective tissue decreases. Decreased ground substance can lead to the formation of numerous microadhesions, and possibly contribute to a decrease in flexibility. Decrease in flexibility and movement will result in the ground substance changing from a fluid to a more solid form. When it is left immobile and undisturbed, ground substance has a tendency to further solidify. This in turn results in solidification of synovium and connective tissue, leaving an individual much more vulnerable to injury. Unless irreversible fibrotic changes have occurred or other underlying pathologies exist, the state of an individual's connective tissue can be changed from a gel-like substance (which limits movement) to a more watery and flexible solute through therapeutic intervention applied by a trained practitioner. Interventions might include introduction of energy through muscular activity, soft tissue manipulation, heat, and vibration and [yoga]." (Lindsay, Fascia, 2008)

Piezoelectricity

Piezoelectricity is the phenomenon whereby crystals generate electricity when they are deformed (under a mechanical stress). You're probably familiar with children's sneakers that light up in the sole of the shoe when their foot strikes the ground. A small crystal in the heel generates sufficient electricity to light up the mini-bulb in the heel.

The piezoelectric effect is responsible for how bones remodel, and strengthen, in response to weight bearing exercise. Lesondak tells us, in his book *Fascia*, that, "Piezoelectricity is the ability of certain organic materials to produce an electrical charge in response to mechanical stress. In this case the piezoelectric signal tells the bone-eating osteoclasts to stay away, and so the bone-building osteoblasts go to work which results in stronger bone. This process of a mechanical signal generating a cellular change is called mechanotransduction."

Many people in the world of fascia believe that fascia also possesses piezoelectric properties. That when we stress the fascia, it too generates small electrical signals, streaming these signals through the network of ECM, and at this point, this view is still speculative and requires further research to validate.

But, Dr. Daniel Keown believes that piezoelectricity is a kind of Qi. He calls it piezo-elect-Qi-city. And it forms one of the theoretical concepts linking the state of the fascia in the body to the circulation and distribution of Qi in the meridians.

Proprioception

Proprioception is a word that comes from the Latin, *proprius*, meaning "own" and English, receptive. So, literally, proprioceptive means receptive to one's own. Generally speaking, proprioception refers to a sense of one's body in terms of how and where it is in space.

In his glossary in *Fascia*, Lesondak defines proprioception as the "perception mediated by sensory nerve endings found in muscles and fascia, which give information concerning movement and position of the body."

Proprioception is a kind of somatic self-awareness, literally a "grasping of one's self." The late, great neurologist Oliver Sacks defined proprioception as "the unconscious sense that allows you to move normally."

If you can close your eyes and touch the tip of your nose with your index finger, your proprioception is working. For someone whose proprioception has been compromised or eliminated, such a simple task becomes extremely challenging or impossible.

Interoception

Interoception, "is defined as the awareness of one's body state, our sense of the body's own internal signals. While it is just beginning to be understood, interoception is essential to our sense of embodiment, motivation, and well-being (Farb 2015)."

An example of interoception would be your perception of your own heartbeat.

Body/mind practices such as yoga, meditation, Tai Chi, etc., are believed to increase and enhance proprioception and interoception because of the stronger connections forged between brain and the sensory receptors embedded in the fascia throughout the body.

Connective Tissue and Energy Medicine

For a long while, Western scientists - when looking for mechanisms to support the theories of Asian Medicine, especially Traditional Chinese Medicine - have been dismissive of these ancient, holistic models because whenever they went looking for a 'meridian' in a the cadaver lab, they came up empty handed. They would remove all that stuff (fascia) around the muscles, nerves, blood vessels and bones, and fail to find the elusive energy channels of Chinese Medicine.

But over the last few decades, bodyworkers, acupuncturists, and more recently, researchers, have begun to propose an interesting theory: Modern Meridian Theory. This theory proposes the idea that the channels/meridians of Chinese Medicine are located with planes of fascia/connective tissue.

Part of this theory is based on the traditional location descriptions of acupuncture points and meridians as found in ancient texts. Frequently, one finds the location described as "in the space between" two bones, or between a muscle and bone, or between a tendon and muscle. We, of course, know that the space between things is filled with fascia.

Moreover, Dr. Helene Langevin has mapped out the locations of the arm meridians and found there to be a roughly 80% correspondence between the traditional location of the meridian and planes of intra-muscular and inter-muscular connective tissue.

"Acupuncture meridians traditionally are believed to constitute channels connecting the surface of the body to the internal organs. We hypothesize that the network of acupuncture points and meridians can be viewed as a representation of the network formed by interstitial connective tissue. This hypothesis is supported by ultrasound

images showing connective tissue cleavage planes at acupuncture points in normal human subjects. To test this hypothesis, we mapped acupuncture points in serial gross anatomical sections through the human arm. We found an 80% correspondence between the sites of acupuncture points and the location of intermuscular or intramuscular connective tissue planes in postmortem tissue sections. We propose that the anatomical relationship of acupuncture points and meridians to connective tissue planes is relevant to acupuncture's mechanism of action and suggests a potentially important integrative role for interstitial connective tissue." Anat Rec (New Anat) 269:257-265, 2002.

Dr. Langevin will be the first to say that she is NOT *proving* that the meridians of Chinese Medicine ARE connective tissue. However, she is beginning to establish a strong correlation. And hopefully, with more research, more light will be shed on some of the unsolved mysteries of Chinese Medicine as we learn more and more about the role of connective tissue and fascia.

James Oschman, in his book *Energy Medicine* offers a less hedged perspective:

"All the great systems of the body - the circulation, the nervous system, the musculoskeletal system, the digestive tract, the various organs and glands - are everywhere covered with material that is but part of a continuous connective tissue fabric. The connective tissues form a mechanical continuum, extending throughout the animal body, even into the innermost parts of each cell. The connective tissues determine the overall shape of the organism as well as the detailed architectures of its parts. All movement, of the body as a whole or of its smallest parts, is created by tensions carried through the connective tissue fabric. Each tension, each compression, each movement causes the crystalline lattice of connective tissue to generate bioelectronic signals that are precisely characteristic of those tensions, compression and movements. The connective tissue fabric is a semi-conducting communication network that can carry bioelectronic signals between every part of the body and every other part."

"The meridian system, which acupuncture theory visualizes as branching into every part of the organism, can be extended into the interiors of every cell in the body, and even into the nuclei that contain the genetic material. The meridians are simply the main channels or transmission lines in the continuous molecular fabric of the body. The molecular web is more than a mechanical anatomical structure. It is a continuous vibratory network. As such, it presents possibilities of profound biological and clinical significance."

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Bananasana

Target Area(s):

- Side body, especially side waist
- IT band
- Intercostals

To Enter: Lie on the back, bend the knees and plant the feet to the floor. Pick up the hips moving them to the right. Straighten the legs toward the left corner of the mat, keeping the sacrum flush with the floor. Scoot the upper body toward the left upper corner of the mat, creating a "banana-like" shape with the body. Raise the arms overhead, elbows bent or straight, with option of clasping wrists.



Modifications:

- If the shoulders are uncomfortable with the arms overhead, arrange the arms in a way that feels beneficial, but still affects the side of the trunk and outer line of the leg

Considerations + Variations:

- Hold the hands on the elbows
- Extend the arm fully on the targeted side, with the opposite hand holding the wrist
- Cross the ankles - try both ways, and determine which is preferred based on what is felt in the pose

Similar Yang Pose(s): Half Moon Pose

Butterfly

Target Area(s):

- Inner thighs and groins
- Outer hips
- Spine

To Enter: From a seated position, draw the soles of the feet together and slide them away from you. Fold forward, allowing the spine to round and the head to drop toward the heels. Rest the hands on the floor or the feet (Figure 1a and Figure 1b).



Figure 1a



Figure 1b

Modifications:

- Sit on the edge of a blanket to elevate the hips and potentially increase the sensation in the hips and/or assist with the flexion of the pelvis if this is desirable. Having the hips higher than the knees can be helpful in the event of sciatica.
- Rest the head on a prop for support.
- Avoid the spinal flexion by taking the shape on the back. Draw the knees toward the armpits to target the hips and inner thighs.

Considerations + Variations:

- Take the feet farther away from the hips to possibly place more emphasis on the hamstrings, outer hips and/or spine. (Figure 2a and Figure 2b)



Figure 2a



Figure 2b

- Explore different arm and hand positions.
- Monitor the strain placed in the neck and use a prop for support, such as a block (Figure 3), or a bolster over the thighs.
- Support the knees with blocks if the stress to inner or outer hips is too strong. (Figure 4)
- Maintain a zero-tolerance for knee sensation when the thighs are externally rotated. To mitigate knee strain, either change the position of feet (moving them forward) or place support (blocks) under the knees.

Similar Yang Pose(s): Baddha Konasana



Figure 3



Figure 4

Cat Tail

Target Area(s):

- Spine
- Quadriceps
- Chest
- Arms

To Enter: Lie on your right side, prop onto the right forearm, and pull the left leg in front of you as though you were about to crawl. Reach behind with the left arm to catch ahold of the right foot (Figure 1).



Figure 1

Modifications:

- Support the front leg knee with a block (Figure 2)

Considerations + Variations:

- Drop onto the back of the arm to hold the head (Figure 3)
- Lie back, letting the head and shoulders rest on the ground (Figure 4)
- Explore taking the back thigh farther back to increase the extension in the hip
- From Figure 4, consider straightening the front leg and holding the outer edge of the foot
- From Figure 4, let go of the grip of the foot, and allow gravity to do the work

Similar Yang Pose(s): Jathara Parivartanasana



Figure 2



Figure 3



Figure 4

Caterpillar

Target Area(s):

- Spine
- Backs of legs, including hamstrings
- Entire back line of the body

To Enter: From a seated position with the legs straight and extended, fold over the legs allowing the spine to round (Figure 1).



Figure 1

Modifications:

- Sit on a blanket to elevate the hips to potentially assist with the flexion of the pelvis if this is desirable. Having the hips higher than the knees can be helpful in the event of sciatica (Figure 2)
- If hamstrings prevent the legs from fully extending, bend the knees and use a bolster for support (Figure 3)

Considerations + Variations:

- If the neck feels strained, use the arms or a prop for support
- Experiment with different hand placements and arm positions
- Try taking the legs slightly farther apart as well as allowing the legs to externally or internally rotate
- If rounding (flexing) the spine aggravates the lower back, keep the back straight
- Use a bolster to support the upper body (Figure 4)
- Avoid spinal flexion by keeping the spine long. Allow the hands to hold onto whatever is comfortable and/or available, i.e., the feet (Figure 5), the shins, the floor, or a strap looped on the bottoms of the feet.
- Rest the elbows on the floor, hands holding the sides of the feet (Figure 6)



Figure 2



Figure 3



Figure 4



Figure 5



Figure 6

Similar Yang Pose(s): Paschimottanasana

Deer

Target Area(s):

- Hips
- Spine

To Enter: From BUTTERFLY, swing one leg behind you, internally rotating the thigh, and drawing that foot behind the hip. Position the front foot farther away until you meet first resistance. Stay upright, with the sitting bones heavy (Figure 1).



Figure 1

Modifications:

- If the hips are not level, try placing a blanket under the lifted sitting bone
- Move the feet closer to the body if there is pain in the hips and/or knees

Considerations + Variations:

- Create a twist, by turning toward the back leg and folding forward, dropping onto the hands or forearms (Figure 2)
- Support the torso with a bolster (Figure 3)

Similar Yang Pose(s):

- Virasana
- Ardha Padmasana
- Bharvadjasana



Figure 2



Figure 3

Dragon

Target Area(s):

- Hip flexors, Quadriceps of back leg
- Inner groin of front leg
- Hamstrings of front leg
- Outer hip of front leg

To Enter: From hands and knees or Down Dog, step one foot between the hands. Keeping the back knee down, slide it behind the line of the hip, or back far enough to potentially observe sensation in the front of the thigh (Figure 1). Back toes may be untucked or tucked (Figure 2). This variation is called BABY DRAGON.



Figure 1



Figure 2

Modifications:

- Avoid pressure in the back knee by placing a blanket under the shin of the back leg (Figure 3)
- Place a rolled up blanket to support the back leg ankle (Figure 4)
- Use blocks for the hands or forearms to elevate the floor



Figure 3



Figure 4

Considerations + Variations:

- Place the hands inside the front leg for INSIDE DRAGON (Figure 5)
- Push the front thigh to the side, while keeping the spine long and chest lifted, rotate the torso for TWISTING DRAGON (Figure 6), or relax the upper body but keep the twist, letting the top arm drape on the thigh (Figure 7)

- Roll on the outer edge of the front foot, staying on the hands or dropping to forearms for WINGED DRAGON (Figure 8)
- Catch the back foot for DRAGON TAIL (Figure 9)
- From BABY DRAGON, draw the front foot back a few inches and lay the torso over the front thigh, walking the hands forward. Allow the front heel to lift slightly to exercise the ankle and Achilles tendon for OVERSTEPPING DRAGON (Figure 10).
- From BABY DRAGON (as shown) or INSIDE DRAGON, scoot the front foot forward so the heel is beyond the knee for GECKO (Figure 11)
- GECKO variations are similar to Hanumanasana or the classic "runner's stretch". Figure 12 - extend the front leg forward, lifting the foot, hands on either side of the extended leg; Figure 13 - use blocks; Figure 14 - keep the back thigh vertical, taking the pressure off the hip flexor, and fold over the extended leg; Figure 15 - with the back thigh vertical, walk the hands inside the extended leg and fold.
- FRAGON, a Josh Summers original, has the front leg in DRAGON, back leg in FROG (Figure 16)

Similar Yang Pose(s): Anjaneyasana



Figure 5



Figure 6



Figure 7



Figure 8



Figure 9



Figure 10



Figure 11



Figure 12



Figure 13



Figure 14



Figure 15



Figure 16

Dragonfly

Target Area(s):

- Inner lines of the legs (groins / adductors/inner knees)
- Back body; side body

To Enter: From a seated position, take the legs apart, only to the point where first resistance is experienced. Place the hands in front of you and fold forward (Figure 1).



Figure 1

Modifications:

- Sit on the edge of a blanket or bolster to elevate the hips to potentially increase the sensation in the target area and/or assist with the flexion of the pelvis if this is desirable. Note: Having the hips higher than the knees can be helpful in the event of sciatica.
- If there is pain in the knees, bend the legs
- A bolster or rolled up blanket under one or both knees may assist with knee pain or extreme tension in the hamstrings

Considerations + Variations:

- Try contracting the quadriceps on occasion if knee discomfort persists
- In the event of low back disorders where the spine is not encouraged to flex for long periods, take this pose to the wall - lying on the back with legs up and spread apart
- Release with care! Upon exiting the pose, contract the quadriceps and place the hands behind the knees to bend the legs and draw them together. Internal and external movement of the legs can be a welcoming sensation upon release (windshield wipers movement)
- Place the elbows on a block to support the head (Figure 2)
- Rest the forearms on the ground (Figure 3)
- Fold over the leg to increase the sensation in the spine (Figure 4)
- Invite lateral flexion to the spine by placing one hand inside the leg, opposite hand to the hip and side bending over the leg (Figure 5)
- Support the arm on a block or bolster and allow the opposite arm to rest behind or alongside the head to stimulate the side body (Figure 6)
- Minimize the forward flexion by supporting the forehead with an upright bolster (Figure 7)
- Use a bolster to support the torso (Figure 8)

Similar Yang Pose(s): Upavistakonasana



Figure 2



Figure 3



Figure 4



Figure 5



Figure 6



Figure 7



Figure 8

Eye of Needle

Target Area(s):

- Outer hip

To enter: Lie on the back, crossing an ankle over the opposite knee. Draw the legs into the chest, holding onto the back of the thigh or front of the shin (Figure 1).



Figure 1

Modifications:

- Keep the foot on the ground if drawing the legs in creates too much discomfort in the hips or back

Considerations + Variations:

- Take this shape to the wall to avoid holding onto the bent leg. Plant one foot against the wall, and cross the opposite ankle over the knee. Depending on what is felt in the outer hip and knee will determine how close the hips should be to the wall.
- Increase the sensation in the outer hip by drawing the top leg in toward the chest, cradling the lower leg. Opposite leg can extend, or the foot can rest on the ground (Figure 2).



Figure 2

Flamenco Series

Target Area(s):

- Inner, outer and back lines of leg

To Enter: From a lying position, loop a strap on the bottom of the foot, and extend the leg toward the ceiling. Work to straighten the lifted leg to target the back line of the leg (Figure 1). Hold for 1-2 minutes, then adduct the leg (Figure 2) to target the inner line of the leg. Hold for 1-2 minutes, then abduct the leg (Figure 3) to target the outer line of the leg.



Figure 1



Figure 2



Figure 3

Modifications:

- If there is pain in the lower back, bend the opposite leg, resting the foot on the floor

Considerations + Variations:

- Can be practiced dynamically, moving from abduction to adduction coordinated with the breath
- From Figure 1, explore internally and externally rotating thigh
- From Figure 1, internally rotate thigh, and draw foot toward the opposite shoulder, keeping the sacrum on the floor
- Using a long belt, secure the belt around the upper back and behind the foot, keeping the hands free

Similar Yang Pose(s): Supta Padangusthasana

Frog

Target Area(s):

- Inner thighs, groins

To enter: Starting in child's pose, take the knees wide, and experiment with the placement of the feet, lower legs, and hips. Drop onto the forearms and draw the hips forward to the point where sensation is observed on the inner line of the legs.



Modifications:

- Cushion the knees with a blanket.
- Stay upright on the hands or support the forearms with a bolster or block.

Considerations + Variations:

- Take the feet closer together, toes touching.
- Move the feet farther apart, aligning the heels with the knees, perhaps the feet turn out, with the inner edges of the feet on the floor.
- Allow the chest to drop closer to the floor and from there, experiment with different arm positions.

Half-Butterfly

Target Area(s):

- Spine
- Hamstrings
- Groins
- Knee

To Enter: From a seated position, extend one leg, drawing the opposite foot toward the inside of the extended leg. Fold forward, rounding the spine, with the hands on either side of the extended leg (Figure 1) and (Figure 1a).



Figure 1



Figure 1a

Modifications:

- Sit on the edge of a blanket to elevate the hips to potentially increase the sensation in the target area and/or assist with the flexion of the pelvis if this is desirable
- Place the bent leg knee on a block (Figure 2) and (Figure 2a)



Figure 2



Figure 2a

Considerations + Variations:

- Explore the placement of the bent leg foot against the extended leg. Can be brought further down the leg, closer to the knee (Figure 3)
- Test different hand and arm variations, such as resting hands or forearms on floor or holding onto the foot (Figure 4)
- If pain is present in the knee of the extended leg, use a rolled up blanket for support, or try

contracting the thigh

- If the leg does not fully extend due to tension in the hamstring, place a blanket or bolster under the knee
- Avoid spinal flexion by drawing length to the spine, or take the shape on the back
- Draw the extended leg out to the side (abduction), and fold down the center line (Figure 5)
- Support the knee if necessary (Figure 6)
- Place one leg in 1/2 frog (heel in toward the hip or heel in line with the knee, toes turned out) and fold forward over the extended leg (Figure 7 and Figure 7a)
- With one leg in 1/2 frog, abduct the extended leg (Figures 8, Figure 8a and Figure 8b) and fold down the center line
- Sit on a block to elevate the hips in 1/2 frog (Figure 9 and Figure 9a)
- Take a side bend over the abducted, extended leg.

Similar Yang Pose(s): Janusirsasana; Triang Mukha Eka Pada Paschimottanasana



Figure 3



Figure 4



Figure 5



Figure 6



Figure 7



Figure 7a



Figure 8



Figure 8a



Figure 8b



Figure 9



Figure 9a

Melting Heart Pose: Anahatasana

Target Area(s):

- Chest
- Spine
- Arms and shoulders

To Enter: From hands and knees, walk the hands forward, allowing the chest and head to drop to the floor, keeping the thighs vertical (Figure 1).



Figure 1

Modifications:

- Pad the knees with a blanket
- Experiment with the angle of the arms if shoulder flexion is compromised

Considerations + Variations:

- Place the hands on blocks (Figure 2)
- Place the elbows on blocks to increase thoracic extension and target the triceps (Figure 3)
- Take one arm forward, resting the head on the opposite forearm (Figure 4), or on the floor just behind the bent arm for QUARTER DOG
- Observe different angling of the hips, keeping them in line with the knees, or drawing them slightly behind the knees (Figure 5)

Similar Yang Pose(s): Modified down dog/puppy stretch



Figure 2



Figure 3



Figure 4



Figure 5

Neck Release

Target Area(s):

- Neck

To enter: From a seated position, gently allow the head to drop towards one shoulder, wrapping the opposite arm behind the back to hold onto the arm.



Considerations + Variations:

- Do this with or without the wrapping of the arm.
- Experiment with different seated postures and elevation of the hips.
- Use the hand to gently coax the neck toward the shoulder.
- Allow the head to draw forward toward the chest, and back, gazing upward.

Open Wing

Target Area(s):

- Shoulder
- Arm
- Chest

To Enter: Lie face down, and take the right arm out to the side, in line with the shoulder, palm facing the floor. Bring the left hand under the left shoulder to roll onto the right hip, stimulating the chest and underside of the arm. Bend the knees any amount that is comfortable (Figure 1).



Figure 1

Modifications:

- If placing the arm at a 90 degree angle creates pain in the shoulder, experiment with the angle of the arm, taking it lower than the shoulder (Figure 2)
- As you press away from the floor, roll only to the point where you experience first resistance, or that mild edge of sensation. Stacking the hips may not be appropriate.

Considerations + Variations:

- Experiment with all angles of the arm to find the position that targets the area
- Take the front foot on the floor either in front of or behind the back leg (Figure 3)
- Wrap the front arm behind the back (Figure 4) or clasp hands
- Bend the extended arm before rolling onto hip (Figure 5)



Figure 2



Figure 3



Figure 4



Figure 5

Outrigger

Target Area(s):

- Inner thighs, groins

To enter: From TADPOLE, extend one leg out to the side with the inner edge of the foot toward the floor (Figure 1).



Figure 1



Figure 2

Modifications:

- Cushion the bent leg knee with a blanket if the knee is sensitive.
- Place the hands on the ground to raise the upper body from floor.

Considerations + Variations:

- Draw the toes of the extended leg toward the sky to stimulate the inner leg in a slightly different way (Figure 2).
- Experiment with the angle of the bent leg, with the heel closer toward the buttock or farther away like in FROG.

Prone Eagle Arms

Target Area(s):

- Shoulders
- Underside of arms

To Enter: Lying face down, prop up onto the elbows, and wrap arm on top, crossing at the elbows and possibly again at the wrists. Slide the elbows farther away, allowing the head to rest on the arms (Figure 1).



Figure 1



Figure 2

Modifications:

- Press onto the elbows and draw the forearms together, sliding forward, instead of wrapping the arms

Considerations + Variations:

- Keep the cross at the elbows, allowing the arms to straighten, pressing the backs of the arms toward the floor (Figure 2)
- From Figure 2, allow one arm to straighten overhead

Similar Yang Pose(s): Garudasana

Reclining Twist

Target Area(s):

- Spine
- Chest
- Shoulders
- Arms
- IT band

To Enter: Lying on the back, draw the knees into the chest and roll to your right side. Peel the left arm open, allowing the upper body to rest toward the floor, arm extended to the left side (Figure 1).



Figure 1

Modifications:

- In the event of shoulder pain, use prop support or change the angle of the arms.

Considerations + Variations:

- Wrap the top leg over the bottom leg for TWISTED ROOT (Figure 2)
- Extend the bottom leg (Figure 3)
- Explore arm positions to bring sensation in the chest and arms
- Experiment with the angle of the knees in relation to the hips. Notice where sensation in the spine is felt when the knees are drawn higher, in line with, or lower than the hips.
- Turn the head to either side or keep in a neutral position

Similar Yang Pose(s): Jathara Parivartanasana



Figure 2



Figure 3

Saddle

Target Area(s):

- Sacrum and lumbar
- Ankles
- Knees
- Quadriceps, hip flexors
- Front line of the body
- Shoulders

To Enter: Begin by sitting on the heels, and slowly lean back on the hands, allowing the back to arch (Figure 1). From here, drop onto the forearms, allowing the head to hang back (Figure 2), and so long as the sensation in the lower back, knees and front of the thighs is mild and tolerable, drop all the way back, resting the shoulders and head to the floor (Figure 3). Arms may be raised overhead to stimulate the chest and arms (Figure 4).



Figure 1



Figure 2



Figure 3



Figure 4

Modifications:

- If pain is experienced in the ankles, try a rolled up blanket underneath them to see if that helps, or placing a block or two under the hips. (Figure 5) If not, consider skipping the pose.
- Use a bolster for the forearms (Figure 6), and from there, the shoulders (Figure 7), and explore taking the arms overhead (Figure 8)



Figure 5



Figure 6



Figure 7



Figure 8

Considerations + Variations:

- If the knees protest, try sitting higher on blocks and experimenting with distance between the knees before you start to lean back. If pain persists, take one of the aforementioned modifications with the legs fully extended, or, alternatively, take SPHINX, SEAL, or SUPPORTED BRIDGE.
- Before reclining back, try taking the knees wider apart
- Explore HALF SADDLE, by sitting on the heels and extending one leg. Take the arms back and drop the head (Figure 9) or keep it neutral.
- Progress through the stages in HALF SADDLE as outlined in FULL SADDLE POSE. Come onto the forearms (Figure 10), or lie back with (Figure 11) or without the support of the bolster.
- Bend the extended leg in HALF SADDLE (Figure 12).
- Experiment with the height of bolsters to support the upper body.
- Using a bolster lengthwise can be helpful; just monitor when the prop starts to absorb the stress that's intended for the tissues.

Similar Yang Pose(s): Supta Vajrasana and Supta Virasana



Figure 9



Figure 10



Figure 11



Figure 12

Savasana - Resonance Pose

Target Area(s):

- None. There should be no stress placed anywhere in the body as observed in the other yin postures.

To Enter: Lie on your back, resting the arms alongside the body, palms facing up (Figure 1). Release any muscular tension, and allow the entire body to fully relax and take rest.



Figure 1

Modifications:

- Support the back of the head to neutralize the neck.
- Place support behind the knees to minimize any strain in the lower back.

Considerations + Variations:

- *During Practice.* Staying for 1-2 minutes can be a good time to observe the body's response to the stress placed upon the tissues. Props would not be necessary or helpful for this constructive rest period.
- *After Practice.* Allow this time to fully absorb the benefits of the Yin Yoga practice. Rest anywhere between 7-20 minutes
- Raise the arms overhead, palms toward the ceiling, taking legs wider than hips for Pentacle Pose (Figure 2)



Figure 2

Shoelace

Target Area(s):

- Outer hips
- Lower back

To Enter: From a cross-legged position, lean to one side, taking the opposite thigh on top of the other. Once the thighs are crossed, the knees may more or less line up with one another, with feet somewhere to the sides of the outer hips (Figure 1). Walk the hands in front of the legs and fold forward any amount (Figure 2) and (Figure 3).



Figure 2



Figure 2



Figure 3

Modifications:

- Sit on a blanket or block to decrease the external rotation and make the pose more accessible. (Figure 4)
- If pain is present in the bottom knee, try widening the knees
- Use a block for the forearms (Figure 5)
- Support the head in the hands (Figure 6), or with a block (Figure 7)



Figure 4



Figure 5



Figure 6



Figure 7

Considerations + Variations:

- Stimulate the side body by leaning to one side and draping the opposite arm over the head (Figure 8). Use a block if the floor is not within reach (Figure 9)
- Add a spinal twist in either direction
- Garudasana arms (Figure 10)
- Gomukhasana arms (Figure 11) with neck release (Figure 12)
- If the positioning of the legs simply doesn't work for the hips and knees, take SQUARE, SWAN or EYE OF THE NEEDLE

Similar Yang Pose(s): Gomukhasana



Figure 8



Figure 9



Figure 10



Figure 11



Figure 12

Sitting Swan

Target Area(s):

- Arms, shoulders, especially elbows
- Outer hips, possibly

To Enter: Sit on floor, crossing the ankle over the opposite thigh. Turn the hands out, and walk them behind the hips, resting into the straightened arms (Figure 1).



Figure 1

Modifications + Considerations:

- Explore how close the legs are to the chest, and how far back the arms go.
- Consider taking the hands closer to one another to stimulate the chest and the inner line of the arms.
- Play with either rolling shoulders back or allowing them to roll forward.
- Change orientation of palms to influence shoulders and elbows differently

Variations:

- Keep the head neutral, as shown in Figure 1
- Let the shoulders shrug and the chin drop toward the chest (Figure 2)
- Allow the head to drop back (Figure 3)



Figure 2



Figure 3

Snail

Target Area(s):

- Spine
- Back body, including hamstrings

To Enter: From a lying position on your back, bend the knees and use some momentum to swing the hips up, placing the hands on the lower back for support. Allow the spine to round and your feet to fall overhead toward the floor. (Figure 1)



Figure 1



Figure 2

Modifications:

- This posture puts a good deal of pressure on the neck. If you want the same benefit to the spine without the weight in the neck and shoulders, take CATERPILLAR pose instead

Considerations + Variations:

- Avoid this posture if there are low back disorders such as herniated/bulging disks
- This inverted posture is not recommended for those with glaucoma or high blood pressure
- This may not be suitable for pregnant women
- When coming out of the pose, be sure to hold the knees to the chest for at least 1-2 minutes before resting legs or feet on the floor. Always honor the fourth principle of Yin Yoga: Release with Care!
- Allow the knees to rest on the forehead (Figure 2)
- Clasp hands behind the back (Figure 3)
- Take the arms wide (Figure 4)
- Hands can hold onto the feet (Figure 5)
- Bend the legs, drawing knees close to the ears (Figure 6)

Similar Yang Pose(s): Halasana (plough pose); Karnapidasana (ear pressure pose)



Figure 3



Figure 4



Figure 5



Figure 6

Sphinx - Seal

Target Area(s):

- Lower spine
- Neck (depending on angle of head)
- Stomach (in Seal pose)

To Enter: Begin lying down in a prone position (on your stomach). From there, place the elbows under the shoulders, pressing onto the forearms (Figure 1).



Figure 1

Modifications:

- Reduce the compression to the lumbar spine by moving the elbows forward and resting the head on the back of the arms (Figure 2)
- For pregnant students after first trimester, place a bolster under the public bone or thighs to make space for the abdomen (Figure 3)



Figure 2



Figure 3

Considerations + Variations:

- Change the placement of the hands by drawing the palms together in a prayer position (Figure 4)
- Reduce strain in the neck by supporting the head with a block (Figure 5)
- Explore shrugging the shoulders by the ears (Figure 6)
- Widen distance between elbows, especially if numbness occurs in one or both hands
- Place the forearms on blocks or a bolster to increase the extension to the lower back (Figure 7)
- With the arms propped, support the head with the hands (Figure 8)

- To increase the spinal extension, from SPHINX, press into the hands and straighten the arms fully, coming into SEAL POSE (Figure 9)
- From SEAL, explore turning the hands out and walking the hands toward the hips. With the hands more directly under the shoulders, one may experience less in the way of compression (Figure 10) Head can stay neutral, or drop (Figure 11)
- Try walking the hands farther away to see how that affects the sensation (Figure 12)
- Bending the legs may deepen the compression in the sacrum (Figure 13)



Figure 4



Figure 5



Figure 6



Figure 7



Figure 8



Figure 9



Figure 10



Figure 11



Figure 12



Figure 13

Square

Target Area(s):

- Outer hips
- Spine

To Enter: From a seated position, cross the shins and move the feet forward until the shins are as close to parallel as they can go. Try moving the knees closer together, without allowing the feet to draw back (Figure 1), walking the hands forward, and folding over the legs (Figure 2).



Figure 1



Figure 2

Modifications:

- If the knees or ankles are uncomfortable, try placing a rolled up blanket under the shins (Figure 3). Or widen the distance between the knees.
- Sit on a blanket or block to elevate the hips and potentially increase the sensation in the hips and/or assist with the flexion of the pelvis if this is desirable Note: Having the hips higher than the knees can be helpful in the event of sciatica.
- Stay in an upright position and avoid rounding forward if there are any issues with the lower back.



Figure 3



Figure 4

Considerations + Variations:

- Place an ankle over the opposite knee and fold forward (Figure 4)
- If the top leg knee does not rest on the bottom knee, try using a blanket for support (Figure 5)

- Stimulate the side body with lateral flexion (Figure 6)
- Target another aspect of the spine by folding over one knee (Figure 7)
- Other pose options include EYE OF THE NEEDLE, SHOELACE and SWAN

Similar Yang Pose(s): Agnistambhasana



Figure 5



Figure 6



Figure 7

Stirrup

Target Area(s):

- Hips
- Spine

To Enter: Lie on the back and draw the knees into the chest. Collect the soles of the feet, and take the thighs apart, drawing the feet toward the ceiling, somewhat in line with the knees. Use the grip of the feet to gently pull the thighs toward the floor (Figure 1).



Figure 1

Modifications:

- If it's difficult to hold onto the feet, hold the backs of the thighs or the knees
- Experiment with different hand holds, holding from the inner foot and outer foot

Considerations + Variations:

- Do the pose with one leg in flexion, and the other leg extended (Figure 2). It's a nice alternative to DRAGON
- Elevate the hips on a bolster to traction the lower back (Figure 3) and (Figure 4).

Similar Yang Pose(s): Yoga Nidrasana; Happy Baby Pose



Figure 2



Figure 3



Figure 4

Supported Bridge

Target Area(s):

- Sacrum and lumbar
- Hip flexors
- Front line of the body

To Enter: Lie on the back with the knees bent. Lift the hips and place a block underneath the sacrum (Figure 1).



Figure 1



Figure 2

Modifications:

- Alter the height and orientation of the block (Figure 2)
- Consider using a blanket or bolster

Considerations + Variations:

- Experiment with the positioning of the arms; down by the side or overhead
- Straighten one leg (Figure 3)
- Straighten both legs (Figure 4). If pain is felt with both legs straight, try lowering the height of the prop or doing the pose with only one leg straight.

Similar Yang Pose(s): Setu Bandha Sarvangasana



Figure 3



Figure 4

Swan

Target Area(s):

- Outer hips
- Hip flexors
- Possibly adductors/hamstrings

To Enter: From hands and knees, draw the right knee toward the right hand and slide the left leg farther back, testing the sensation in the right hip and knee (Figure 1). From there, drop to the forearms (Figure 2), or fold forward completely (Figure 3) for SLEEPING SWAN. NO STRESS in the forward knee!!



Figure 1



Figure 2



Figure 3



Figure 4

Modifications:

- If the floor is not accessible, use a block or bolster to support the upper body
- If pain is present in the front knee, adjust the angle of that leg, and/or try taking pressure off by supporting the hip with a blanket (Figure 4)

Considerations + Variations:

- Try dropping all the way down onto the front hip, and drawing the chest toward the foot for COLLAPSED SWAN (Figure 5)
- From SLEEPING SWAN, take the arm opposite of the bent leg, and thread it underneath the body, dropping onto the deltoid. From there, take the opposite arm behind the back (Figure 6) or, if available, hold onto the foot (Figure 7)
- Place a block under the front thigh, closer to the knee, to allow gravity to draw the glute toward

the floor for SCREAMING SWAN (Figure 8)

- From SLEEPING SWAN, straighten the front leg out to the side for BLASTED SWAN. Fold forward (Figure 9) or draw chest to the floor and hold the foot (Figure 10)
- Take EYE OF THE NEEDLE if the pressure in the knees is too much

Similar Yang Pose(s): Rajakapotasana



Figure 5



Figure 6



Figure 7



Figure 8



Figure 9



Figure 10

Tadpole (Wide Knee Child's Pose)

Target Area(s):

- Spine
- Groins
- Adductors
- Arm variations invite emphasis to the upper body (arms / chest)

To Enter: From hands and knees, take the knees wide with intention of generating sensation in the inner legs. Move the hips toward the heels and either extend the arms overhead or rest the head on the backs of the arms (Figure 1), or bring the arms back along the side of the body (Figure 2).



Figure 1



Figure 2

Modifications:

- If the head doesn't easily reach the floor, place a prop (block, blanket or bolster) to support the head
- Place a blanket under the knees for support/padding
- Place a rolled up blanket at the front of the ankles to assist with plantar flexion
- In the event of knee pain, try placing a rolled up blanket between thighs and calves, or take a supine version, or avoid the pose

Considerations + Variations:

- Explore different angles with the thighs bringing them closer together, or farther apart as a preparatory pose for FROG
- Use a bolster to support the torso (Figure 3)
- Walk the arms to the left to laterally flex the right side (Figure 4)
- Walk the arms to the right to laterally flex the left side (Figure 5)
- Thread the right arm under the body, placing the left hand on the ground for support (Figure 6)
- From Figure 6, wrap the left arm around the back of the body, catching ahold of waistband or inner thigh (Figure 7)
- From Figure 6, use the right hand to assist in propping the left shoulder, wrapping the left arm behind the back (Figure 8). Allow the arrangement of the arms to support the upper body.

Similar Yang Pose(s): Balasana



Figure 3



Figure 4



Figure 5



Figure 6



Figure 7



Figure 8

Yang Poses

Cat / Cow



When to incorporate: The flexion and extension of the spine can serve as a countermovement to SPHINX, SEAL, SADDLE and TADPOLE.

Downward Facing Dog



When to incorporate: Downward Facing Dog allows for an opportunity to fully extend the arms and legs, and axial extension of the spine. One may find this feels nice after any yin pose where the knees and/or hips are in flexion, such as DRAGON and SWAN and their many variations.

Knee Release



When to incorporate: This is work that can be done before a yin practice to prepare the knees for flexion and make poses like SADDLE more accessible.

Mongoose Twist



When to incorporate: This pose is considered an “open twist” as the torso is rotated away from the flexed leg. Practice this after SHOELACE and/or HALF BUTTERFLY.

Plank



When to incorporate: The firmness of the entire body in plank can neutralize and stabilize after any long-held yin posture, and one can choose to flow between DOWNWARD FACING DOG and PLANK to add rhythm. These poses are more easily accessible after doing prone postures with the hands already on the ground, such as SWAN, DRAGON, SPHINX, and SEAL.

Quad Release



When to incorporate: Creating space in the front of the thigh with this pose pairs well with SPHINX, SEAL, CAT TAIL and DRAGON.

Tigress



When to incorporate: Lateral flexion of the spine and stimulation to the outer line of the hip and leg complements TADPOLE, DRAGON, and SWAN.

Tripod



When to incorporate: Adding this yang movement after HALF BUTTERFLY, SHOELACE and CATERPILLAR can stimulate the energy through the upper and lower body.

Toes Pose



When to incorporate: Stressing the plantar fascia in this pose can be done at the beginning of a yin practice, and incorporated with the NECK RELEASE. The dorsiflexion of the feet in this pose can counter the plantar flexion in SADDLE.

Swinging Bridge



When to incorporate: This yang movement is a good counterpose after any spinal flexion such as CATERPILLAR, HALF BUTTERFLY and DRAGONFLY.

Windshield Wipers



When to incorporate: A gentle internal and external rotation of the legs to counter BUTTERFLY, HALF BUTTERFLY, SHOELACE, SQAURE, SWAN, and DRAGONFLY.

Section 6: Yin Yoga Sequences

Sequencing Guidelines

The following is meant to provide a basic structure of a Yin Yoga class. This is not a rigid structure that you need to apply at all times, but will hopefully serve as a basic foundation from which you create your own Yin Yoga sequences.

1. Begin with a 5 minute Centering Meditation, and/or intention setting. Start in a seated meditation posture or savasana.
2. First Yin Posture: 80% of the time, I recommend beginning with either Butterfly or Wide-Knee Child's pose. Other options are savasana or any gentle posture. The intention of beginning this way is twofold: 1) Energetic - consider choosing a pose that stimulates all three Yin meridians of the leg (*i.e.* Butterfly) and 2) Didactic - you want to choose a pose that is mild enough so that when you cover the essential Yin information at the beginning of class, your students will be able to hear and process what you're saying.
3. Mild ROM to Greater ROM: When introducing a new direction of movement, offer poses at milder of ranges of motion first.
4. After back bending, consider targeting outer hips: After one or several backbends in a sequence, consider Swan, Shoelace, Square, or Eye of Needle to begin to decompress the lower back before transitioning into forward folds.
5. Intensity: Generally speaking, I like to try to sequence the more 'sensation-rich' postures (Seal, Saddle, Dragon) towards the middle of the sequence. And then for the latter half of class, I like to sequence longer forward folds and supine poses (twists and Bananasana and Savasana). Students will leave class calm, and the intensity of Dragon will be but a distant memory.
6. All Lines Concept: Often, I try to design a sequence to target the major lines of the body: Front line, Side line, Inner-leg line, Back body line.
7. Talking: For the first ten to fifteen minutes of class, it's very important to educate students about what Yin Yoga is, how to practice, what sensations are ok, and to give them permission to come out or back out of a posture at any time. From there, you can then explore a specific theme for your class. But I try to make clear that I'll be speaking for half the class, and then becoming quiet towards the latter half of class. The idea is to give the students some input to work with, and then give them space to practice what you reflected on.
8. Endings: It's nice to end a sequence with Lying Twists and/or Bananasana, and a 10 minute Savasana. Some teachers like to close with a seated meditation. This is something I'll do in longer workshops but rarely in a 60 or 90 minute class.

Yang and Yin

In the Yang Yoga Module, Terry Cockburn will address sequencing topics related to combining Yin and Yang Yoga in the same sequence. Here, I will mention considerations about sequencing Yang poses within a general Yin sequence.

Yang Within Yin

One way to add Yang poses into your Yin Yoga sequence is to sequence a Yang pose between Yin Poses, and this can be done in one of two ways.

1. **Static Yang:** In between Yin postures, contract and hold a static Yang posture for 30 seconds to a minute. Examples might be, Plank, Downward Facing Dog, Reverse Table, Camel. Emphasis is on contracting the areas that were passively targeted in the previous Yin posture.
2. **Dynamic Yang:** In this option, you would move between two relatively basic Yang postures with the intention of bringing gentle mobility and energetic circulation to the area targeted in the Yin posture. Examples might be Cat/Cow Tilts, moving into and out of Tripod, Swinging Bridge, Downward Dog to Upward Dog and back.

Sequences

Foundations: Online Course

All Lines Sequence

1. Seated neck release
2. Butterfly
3. Sphinx/Seal
4. Open Wing
5. Child's Pose
6. Dragon (inside/twist/gecko)(r/l)
7. Swan (r/l)
8. Dragonfly series (l/r/c)
9. Caterpillar
10. Reclining Twist
11. Savasana

Foundations Day 1 / Emphasis: Flexion/Extension

1. Neck release 2-3min
2. Tadpole with Lateral Flexion R + L 2-3min
3. Sphinx 3-4min
4. Seal 3-4min
5. Child's 2-3min
6. Down Dog 1-2min
7. Squat 2-3min
8. Dangle 1-2min
9. Baby Dragon 1min
 - Wandering Dragon 1min to
 - High Dragon 1min (repeat other side)
10. Saddle 5min
11. Collapsed Swan 5min
12. Caterpillar 5min
13. Snail 3-4min
14. Reclining Twist 5min to
15. Bananasana 3-4min (repeat other side)
16. Savasana 10min

Foundations Day 2 / Emphasis: Internal/External Rotation

1. Butterfly 5min
2. Half Butterfly 3-4min
3. Deer 1min to
4. Twisted Deer 5min (repeat other side)
5. Sphinx and/or Seal 5min
6. Inside Dragon 1min to
 - Twisting Dragon 1min to
 - Gecko 1min (repeat other side)
9. Swan Variations 5min
10. Square 2-3min to
11. ½ Frog 2-3min (repeat other side)
12. Dragonfly variations 2-3min
13. Windshield Wipers 1min
14. Reclining Twist 5min
15. Savasana 10min

Foundations Day 3 / Emphasis: Abduction/Adduction

1. Flamenco Series 1min for each
2. Tadpole 1-2min to
3. Outrigger 2-3min (repeat other side)
4. Cat Tail 4-5min
5. Cat / Cow 1min
6. Tigress 1min
7. Frog 4-5min
8. Shoelace 3-4min to
 - ½ Shoelace 2-3min (repeat other side)
9. Inside Dragon 1min to
 - Winged Dragon 1min to
 - Overstepping Dragon 1min to
 - Fragon 1min (repeat other side)
10. Sphinx 5min
11. Bullfrog 3-4min (not in manual)
12. Supported Bridge 4-5min
13. Stirrup Variations 2-3min
14. Reclining Twist 5min
15. Savasana 10min

Foundations Day 4 / Upper Body Sequence

1. Seated Meditation 5min
2. Neck Release - Toes Pose 1-2min
3. Open Wing 3-4min
4. Prone Eagle Arms 2-3min
5. Melting Heart 2-3min
6. ¼ Dog 1-2min
7. Childs to Down Dog to Plank 1-2min
8. Dragon 1min to
 - Twisting Dragon 1min to
 - Dragon Tail 1min (repeat other side)
9. ½ Saddle 4-5min
10. Square with lateral flexion 3-4min
11. Sitting Swan 1-2min to
12. Mongoose Twist 1min to
13. Swinging Bridge 1min (repeat other side)
14. Caterpillar or Snail 4-5min
15. Tripod 1min
16. Eye of Needle 3-4min
17. Bananasana 5min
18. Savasana 10min

Resources

Yin Yoga Resources:

1. *The Complete Guide to Yin Yoga*, Bernie Clark
2. *Your Body, Your Yoga*, Bernie Clark
3. *Yin Yoga*, Paul Grilley
4. *Insight Yoga*, Sarah Powers
5. Bernie Clark's site: www.yinyoga.com
6. Podcast: *Everyday Sublime - Shedding Light on Yin Yoga and Meditation*, Josh Summers
7. DVD: *Anatomy For Yoga; Yin Yoga*, Paul Grilley

Connective Tissue Resources:

1. *Fascia: What it is and why it matters*, Devid Lesondak
2. *Anatomy Trains*, Tom Myers
3. *Fascia in Sport and Movement*, Robert Schleip
4. *Energy Medicine, The Scientific Basis*, James Oschman